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=> d his full

     (FILE 'HOME' ENTERED AT 12:27:40 ON 17 JUL 2006)

     FILE 'REGISTRY' ENTERED AT 12:27:59 ON 17 JUL 2006
                E FERRIOX/CN
L1              1 SEA ABB=ON  PLU=ON  FERRIOXAMINE/CN
                D SCA
L2              1 SEA ABB=ON  PLU=ON  FERRIOXAMINE B/CN
                D SCA
L3              1 SEA ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4              1 SEA ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5              1 SEA ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6              2 SEA ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7              6 SEA ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5 OR L6)
                E TRIHYDROXAMI/CN
                E HYDROXAMI/CN
                E CP94/CN
                E CP 94/CN
L8              1 SEA ABB=ON  PLU=ON  CP 94/CN
                D SCA
                E EDTA/CN
L9              1 SEA ABB=ON  PLU=ON  EDTA/CN
                D SCA
L10             1 SEA ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
                D SCA
L*** DEL        1 S L9-L10
                E DEFEROX/CN
L11             1 SEA ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12             0 SEA ABB=ON  PLU=ON  L11 AND L7
L13             1 SEA ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN OR "DEFEROXAMIN
                E METHANESULFONATE"/CN)
L14             0 SEA ABB=ON  PLU=ON  L13 AND L7
                E DESFERAL/CN
L15             1 SEA ABB=ON  PLU=ON  DESFERAL/CN
                D SCA
L16             1 SEA ABB=ON  PLU=ON  DESFERAL M?/CN
                E APOFERRITIN/CN
L17             1 SEA ABB=ON  PLU=ON  APOFERRITIN?/CN
                E CDTA/CN
L18             1 SEA ABB=ON  PLU=ON  CDTA/CN
                D SCA
                E DTPA/CN
L19             1 SEA ABB=ON  PLU=ON  DTPA/CN
                E PENICILLAMIN/CN
L20             1 SEA ABB=ON  PLU=ON  PENICILLAMINE/CN
                D SCA
                E BATHOCUPROIN/CN
                E BATHOCUPPROIN/CN
L21             6 SEA ABB=ON  PLU=ON  BATHOCUP?/CN
                E DIETHYLENETRIAMINE/CN
L22             4 SEA ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETIC?/CN
L23            23 SEA ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR
                L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR L15 OR L16 OR
                L17 OR L18 OR L19 OR L20 OR L21 OR L22)
                D COST

     FILE 'STNGUIDE' ENTERED AT 12:42:46 ON 17 JUL 2006

     FILE 'STNGUIDE' ENTERED AT 12:53:16 ON 17 JUL 2006
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     FILE 'HCAPLUS' ENTERED AT 12:54:03 ON 17 JUL 2006
                E US2003-617943/APPS
L24              1 SEA ABB=ON  PLU=ON  US2003-617943/APPS
                   D SCA
                   D IALL

     FILE 'STNGUIDE' ENTERED AT 12:54:39 ON 17 JUL 2006

     FILE 'HCAPLUS' ENTERED AT 12:57:00 ON 17 JUL 2006
                SEL RN

     FILE 'REGISTRY' ENTERED AT 12:57:13 ON 17 JUL 2006
L25             36 SEA ABB=ON  PLU=ON  (138-14-7/BI OR 70-51-9/BI OR 115900-75-9/B
                   I OR 117-39-5/BI OR 13291-61-7/BI OR 146426-40-6/BI OR
                   14836-73-8/BI OR 153-18-4/BI OR 17912-87-7/BI OR 446-72-0/BI
                   OR 480-16-0/BI OR 480-18-2/BI OR 480-40-0/BI OR 480-41-1/BI OR
                   482-39-3/BI OR 490-46-0/BI OR 491-70-3/BI OR 491-80-5/BI OR
                   50-78-2/BI OR 52-67-5/BI OR 520-26-3/BI OR 520-27-4/BI OR
                   520-33-2/BI OR 520-36-5/BI OR 522-12-3/BI OR 525-82-6/BI OR
                   577-85-5/BI OR 60-00-4/BI OR 67-43-6/BI OR 73348-75-1/BI OR
                   7439-89-6/BI OR 7440-50-8/BI OR 7447-39-4/BI OR 75-91-2/BI OR
                   7758-94-3/BI OR 989-51-5/BI)
L26              8 SEA ABB=ON  PLU=ON  L25 AND L23

     FILE 'HCAPLUS' ENTERED AT 12:57:43 ON 17 JUL 2006
L27          37763 SEA ABB=ON  PLU=ON  L26
L28              1 SEA ABB=ON  PLU=ON  L24 AND L27
                   D SCA

     FILE 'REGISTRY' ENTERED AT 12:58:24 ON 17 JUL 2006
L29              1 SEA ABB=ON  PLU=ON  70-51-9

     FILE 'HCAPLUS' ENTERED AT 12:58:37 ON 17 JUL 2006
L30           2619 SEA ABB=ON  PLU=ON  L29

     FILE 'REGISTRY' ENTERED AT 12:58:52 ON 17 JUL 2006
L31             24 SEA ABB=ON  PLU=ON  L23 OR L29

     FILE 'HCAPLUS' ENTERED AT 13:32:52 ON 17 JUL 2006
L32          40989 SEA ABB=ON  PLU=ON  L31
L33              1 SEA ABB=ON  PLU=ON  L24 AND L32
                   D SCA

     FILE 'REGISTRY' ENTERED AT 13:33:45 ON 17 JUL 2006
L34             27 SEA ABB=ON  PLU=ON  L25 NOT L31

     FILE 'HCAPLUS' ENTERED AT 13:34:06 ON 17 JUL 2006
L35          16008 SEA ABB=ON  PLU=ON  L34 (L) THU/RL
L36              1 SEA ABB=ON  PLU=ON  L24 AND L35
                   D SCA
                   SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 13:35:00 ON 17 JUL 2006
L37             22 SEA ABB=ON  PLU=ON  (117-39-5/BI OR 146426-40-6/BI OR 153-18-4/
                   BI OR 17912-87-7/BI OR 446-72-0/BI OR 480-16-0/BI OR 480-18-2/B
                   I OR 480-40-0/BI OR 480-41-1/BI OR 482-39-3/BI OR 490-46-0/BI
                   OR 491-70-3/BI OR 491-80-5/BI OR 50-78-2/BI OR 520-26-3/BI OR
                   520-27-4/BI OR 520-33-2/BI OR 520-36-5/BI OR 522-12-3/BI OR
                   525-82-6/BI OR 577-85-5/BI OR 989-51-5/BI)
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L38           1 SEA ABB=ON  PLU=ON  50-78-2
L39          21 SEA ABB=ON  PLU=ON  L37 NOT L38

     FILE 'HCAPLUS' ENTERED AT 13:35:37 ON 17 JUL 2006
L40       34358 SEA ABB=ON  PLU=ON  L39
L41           1 SEA ABB=ON  PLU=ON  L40 AND L24
                D SCA

     FILE 'STNGUIDE' ENTERED AT 13:36:14 ON 17 JUL 2006

     FILE 'HCAPLUS' ENTERED AT 13:36:39 ON 17 JUL 2006
                E ATAXIA TELANGIECTASIA+ALL/CT
                E E2+ALL
L42        1665 SEA ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/OBI
L43        2356 SEA ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/BI
L44           0 SEA ABB=ON  PLU=ON  LOUIS BAR/OBI
L45           8 SEA ABB=ON  PLU=ON  LOUIS BAR/BI
L46           8 SEA ABB=ON  PLU=ON  LOUIS-BAR/BI
L47           0 SEA ABB=ON  PLU=ON  CEREBELLO OCULOCUTANEOUS TELANGIECT?/BI
L48           0 SEA ABB=ON  PLU=ON  CEREBELLO OCULOT?/BI

     FILE 'STNGUIDE' ENTERED AT 13:39:59 ON 17 JUL 2006

     FILE 'HCAPLUS' ENTERED AT 13:40:24 ON 17 JUL 2006
L49        2363 SEA ABB=ON  PLU=ON  (ATAXIA (2A) TELANGIECT?)/BI
                E CHELATING AGENT+ALL/CT
                E CHELATING AGENTS+ALL/CT
L50       15362 SEA ABB=ON  PLU=ON  CHELATING AGENTS+OLD,NT/CT
L51       40989 SEA ABB=ON  PLU=ON  L31
L52        2369 SEA ABB=ON  PLU=ON  (L42 OR L43 OR L44 OR L45 OR L46 OR L47 OR
                L48 OR L49)
L53       52491 SEA ABB=ON  PLU=ON  (L50 OR L51)
L54           7 SEA ABB=ON  PLU=ON  L52 AND L53
                D SCA
L55       34358 SEA ABB=ON  PLU=ON  L39
L56           4 SEA ABB=ON  PLU=ON  L54 AND L55
L57      144038 SEA ABB=ON  PLU=ON  ANTIOXID?/BI
                E FLAVANOIDS+ALL/CT
                E E2+ALL/CT
L58       57074 SEA ABB=ON  PLU=ON  FLAVONOIDS+NT,OLD,UF/CT
L59       34491 SEA ABB=ON  PLU=ON  FLAV!NOID?/BI
L60           4 SEA ABB=ON  PLU=ON  L54 AND (L57 OR L58 OR L59)
                D SCA
L61       11651 SEA ABB=ON  PLU=ON  ?HYDROXAMIC ACID?/BI
                E FERRITINS+ALL/CT
L62        9439 SEA ABB=ON  PLU=ON  FERRITINS+OLD,UF/CT
L63          17 SEA ABB=ON  PLU=ON  L52 AND (L61 OR L62)
L64          14 SEA ABB=ON  PLU=ON  L63 NOT L54
L65         374 SEA ABB=ON  PLU=ON  FERRITINS/CT (L) (THU OR BAC OR DMA OR PAC
                OR PKT)/RL
L66           5 SEA ABB=ON  PLU=ON  L65 AND L52
L67           3 SEA ABB=ON  PLU=ON  L66 NOT L54
                D SCA
                D SCA TI
                E HYDROXAMIC ACIDS+ALL/CT
L68       15322 SEA ABB=ON  PLU=ON  HYDROXAMIC ACIDS+NT/CT
L69          29 SEA ABB=ON  PLU=ON  L68 AND L52
L70      132130 SEA ABB=ON  PLU=ON  CHELAT?/BI
L71           3 SEA ABB=ON  PLU=ON  L69 AND L70
                D SCA
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L72           6 SEA ABB=ON  PLU=ON  L70 AND L52
L73           1 SEA ABB=ON  PLU=ON  L72 NOT L54
                D SCA
L74       29887 SEA ABB=ON  PLU=ON  WANG S?/AU
L75          49 SEA ABB=ON  PLU=ON  SHACKELFORD R?/AU
L76          12 SEA ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L77           5 SEA ABB=ON  PLU=ON  L74 AND (L75 OR L76)
L78          12 SEA ABB=ON  PLU=ON  L52 AND (L74 OR L75 OR L76)

     FILE 'MEDLINE' ENTERED AT 14:04:08 ON 17 JUL 2006
                D COST
L79        9295 SEA ABB=ON  PLU=ON  WANG S?/AU
L80          81 SEA ABB=ON  PLU=ON  SHACKELFORD R?/AU
L81          10 SEA ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L82           3 SEA ABB=ON  PLU=ON  L79 AND (L80 OR L81)
                E ATAXIA TELANGIECTASIA+ALL/CT
L83        2457 SEA ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/CT
L*** DEL   3951 S ATAXIA TELANGIECTAS?
                D TRIAL 1-3
L84        3932 SEA ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L85        3935 SEA ABB=ON  PLU=ON  ATAXIA (2A) TELANGIECTASIA
L86        3935 SEA ABB=ON  PLU=ON  (L83 OR L84 OR L85)
L87          13 SEA ABB=ON  PLU=ON  L86 AND (L79 OR L80 OR L81)
                E CHELATING AGENTS+ALL/CT
L88       13204 SEA ABB=ON  PLU=ON  CHELATING AGENTS/CT
L89       92986 SEA ABB=ON  PLU=ON  CHELATING AGENTS+NT/CT
L90        3231 SEA ABB=ON  PLU=ON  IRON CHELATING AGENTS/CT
L91       19528 SEA ABB=ON  PLU=ON  IRON CHELATING AGENTS+NT/CT
                E IRON CHELATING AGENTS+ALL/CT
L*** DEL      0 S SIDEPHORES/CT
L*** DEL      0 S SIDEPHORES+NT/CT
L92        1267 SEA ABB=ON  PLU=ON  SIDEROPHORES/CT
L93        6055 SEA ABB=ON  PLU=ON  SIDEROPHORES+NT/CT

     FILE 'REGISTRY' ENTERED AT 14:12:03 ON 17 JUL 2006
                SET SMARTSELECT ON
L94             SEL PLU=ON  L31 1- CHEM :     255 TERMS
                SET SMARTSELECT OFF

     FILE 'MEDLINE' ENTERED AT 14:12:07 ON 17 JUL 2006
L95       68933 SEA ABB=ON  PLU=ON  L94
L96           7 SEA ABB=ON  PLU=ON  L86 AND ((L88 OR L89 OR L90 OR L91 OR L92
                OR L93) OR L95)
                D TRIAL 1-7
L97       37091 SEA ABB=ON  PLU=ON  CHELAT?
L98           5 SEA ABB=ON  PLU=ON  L86 AND L97
L99           0 SEA ABB=ON  PLU=ON  L98 NOT L96
L100      61053 SEA ABB=ON  PLU=ON  ANTIOXID?
L101      18939 SEA ABB=ON  PLU=ON  FLAV!NOID?/BI
L102      32882 SEA ABB=ON  PLU=ON  FLAVONOIDS+NT/CT
L*** DEL      0 S FLAVANOIDS+NT/CT
L103            QUE ABB=ON  PLU=ON  TRANSITION ELEMENTS+NT/CT
L104          3 SEA ABB=ON  PLU=ON  L96 AND ((L100 OR L101 OR L102))
                D TRIAL 1-3
L105          3 SEA ABB=ON  PLU=ON  L96 AND ((L100 OR L101 OR L102 OR L103))
                D TRIAL 1-3

     FILE 'REGISTRY' ENTERED AT 14:18:45 ON 17 JUL 2006
                SET SMARTSELECT ON
L106            SEL PLU=ON  L39 1- CHEM :     344 TERMS
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                SET SMARTSELECT OFF

     FILE 'MEDLINE' ENTERED AT 14:18:48 ON 17 JUL 2006
L107       19788 SEA ABB=ON  PLU=ON  L106
L108           2 SEA ABB=ON  PLU=ON  L107 AND L96
                 D TRIAL 1-2
L109             QUE ABB=ON  PLU=ON  FERRIOXAMIN? OR DEFEROXAMIN? OR DESFERROXAM
                 IN? OR DEFERRIOXAMIN?
L110             QUE ABB=ON  PLU=ON  EDETIC ACID/CT
L111             QUE ABB=ON  PLU=ON  CP94
L112             QUE ABB=ON  PLU=ON  HYDROXAMIC ACIDS/CT
L113             QUE ABB=ON  PLU=ON  APOFERRITIN/CT
L114             QUE ABB=ON  PLU=ON  CDTA
L115             QUE ABB=ON  PLU=ON  DTPA OR PENTATIC ACID
L116             QUE ABB=ON  PLU=ON  PENICILLAMINE
L117             QUE ABB=ON  PLU=ON  BATHOCUPROINE
L118             QUE ABB=ON  PLU=ON  BATHOCUPROIN
L119           6 SEA ABB=ON  PLU=ON  L86 AND (L109 OR L110 OR L111 OR L112 OR
                 L113 OR L114 OR L115 OR L116 OR L117 OR L118)
                 D TRIAL 1-6
L120           1 SEA ABB=ON  PLU=ON  L119 AND L107
                 D TRIAL
L121          13 SEA ABB=ON  PLU=ON  L82 OR L87
L122          10 SEA ABB=ON  PLU=ON  L96 OR L98 OR L105 OR L108 OR L119 OR L120

L123           7 SEA ABB=ON  PLU=ON  L122 NOT L121

     FILE 'EMBASE' ENTERED AT 14:31:14 ON 17 JUL 2006
L124        7035 SEA ABB=ON  PLU=ON  WANG S?/AU
L125           5 SEA ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L126          27 SEA ABB=ON  PLU=ON  SHACKELFORD R?/AU
L127           4 SEA ABB=ON  PLU=ON  L124 AND (L125 OR L126)
                 E ATAXIA TELANGIECTASIA/CT
                 E ATAXIA TELANGIECTASIA+ALL/CT
                 E ATAXIA TELANGIECTASIA+UF/CT
L128        2332 SEA ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA+UF/CT
L129        3044 SEA ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L130          62 SEA ABB=ON  PLU=ON  LOUIS BAR
L131           2 SEA ABB=ON  PLU=ON  ATAXIA TELANGIECTATICA
L132           0 SEA ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLOOCULOCUTANEA
L133           0 SEA ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLO OCULOCUTANEA
L134        3053 SEA ABB=ON  PLU=ON  (L128 OR L129 OR L130 OR L131 OR L132 OR
                 L133)
L135          11 SEA ABB=ON  PLU=ON  (L124 OR L125 OR L126) AND L134
                 E CHELATING AGENT+ALL/CT
L136       98621 SEA ABB=ON  PLU=ON  CHELATING AGENT+NT/CT

     FILE 'REGISTRY' ENTERED AT 14:35:53 ON 17 JUL 2006
                 SET SMARTSELECT ON
L137             SEL PLU=ON  L31 1- CHEM :     255 TERMS
                 SET SMARTSELECT OFF

     FILE 'EMBASE' ENTERED AT 14:35:55 ON 17 JUL 2006
L138       61283 SEA ABB=ON  PLU=ON  L137
L139          14 SEA ABB=ON  PLU=ON  L134 AND (L136 OR L138)
                 D TRIAL 1-14
                 E FLAVONOID+ALL/CT
L140       25033 SEA ABB=ON  PLU=ON  FLAVONOID+NT/CT
                 E ANTIOXIDANT+ALL/CT
L141       35447 SEA ABB=ON  PLU=ON  ANTIOXIDANT+NT/CT
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L142          4 SEA ABB=ON  PLU=ON  L139 AND (L140 OR L141)
                D TRIAL 1-4

     FILE 'REGISTRY' ENTERED AT 14:41:15 ON 17 JUL 2006
                SET SMARTSELECT ON
L143            SEL PLU=ON  L39 1- CHEM :      344 TERMS
                SET SMARTSELECT OFF

     FILE 'EMBASE' ENTERED AT 14:41:16 ON 17 JUL 2006
L144      24101 SEA ABB=ON  PLU=ON  L143
L145          2 SEA ABB=ON  PLU=ON  L139 AND L144
                D TRIAL
                D TRIAL 2
L146         14 SEA ABB=ON  PLU=ON  L139 OR L142 OR L145
L147         11 SEA ABB=ON  PLU=ON  L127 OR L135
L148         10 SEA ABB=ON  PLU=ON  L146 NOT L147
                D TRIAL 1-5
L149      31221 SEA ABB=ON  PLU=ON  CHELAT?
L150          4 SEA ABB=ON  PLU=ON  L149 AND L134
                D TRIAL
                D TRIAL 2-4

     FILE 'BIOSIS' ENTERED AT 14:47:22 ON 17 JUL 2006
L*** DEL      4 S WANS S?/AU
L151      10521 SEA ABB=ON  PLU=ON  WANG S?/AU
L152         52 SEA ABB=ON  PLU=ON  SHACKELFORD R?/AU
L153          7 SEA ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L154          6 SEA ABB=ON  PLU=ON  L151 AND (L152 OR L153)
L155       3180 SEA ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L156         18 SEA ABB=ON  PLU=ON  (L151 OR L152 OR L153) AND L155
                E CHELATING AGENTS+ALL/CT
                E E3+ALL
L157      38028 SEA ABB=ON  PLU=ON  CHELAT?

     FILE 'REGISTRY' ENTERED AT 14:50:27 ON 17 JUL 2006
                SET SMARTSELECT ON
L158            SEL PLU=ON  L31 1- CHEM :      255 TERMS
                SET SMARTSELECT OFF

     FILE 'BIOSIS' ENTERED AT 14:50:28 ON 17 JUL 2006
L159      59051 SEA ABB=ON  PLU=ON  L158
L160       3182 SEA ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA?
L161       4049 SEA ABB=ON  PLU=ON  TRANSITION METAL?
L162        160 SEA ABB=ON  PLU=ON  TRANSITION ELEM?
L163       3396 SEA ABB=ON  PLU=ON  SIDEROPHOR?
L164         42 SEA ABB=ON  PLU=ON  SIDEROCHROM?
L165         72 SEA ABB=ON  PLU=ON  LOUIS BAR
L166       3223 SEA ABB=ON  PLU=ON  L155 OR L160 OR L165
L167            QUE ABB=ON  PLU=ON  L157 OR (L163 OR L164) OR L159
L168          7 SEA ABB=ON  PLU=ON  L166 AND L167
                D SCA
L169      82137 SEA ABB=ON  PLU=ON  ANTIOXID? OR FLAV!NOID?

     FILE 'REGISTRY' ENTERED AT 14:55:16 ON 17 JUL 2006
                SET SMARTSELECT ON
L170            SEL PLU=ON  L39 1- CHEM :      344 TERMS
                SET SMARTSELECT OFF

     FILE 'BIOSIS' ENTERED AT 14:55:17 ON 17 JUL 2006
L171      31206 SEA ABB=ON  PLU=ON  L170
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L172            3 SEA ABB=ON  PLU=ON  L171 AND L168
                  D SCA
L173            0 SEA ABB=ON  PLU=ON  L168 AND (L161 OR L162)
L174           18 SEA ABB=ON  PLU=ON  L154 OR L156
L*** DEL       76 S L168 OR L172 OR L!73
L175            7 SEA ABB=ON  PLU=ON  L168 OR L172 OR L173
L176            4 SEA ABB=ON  PLU=ON  L174 AND L175
                  D SCA

     FILE 'EMBASE' ENTERED AT 14:58:18 ON 17 JUL 2006
L177           14 SEA ABB=ON  PLU=ON  L146 OR L150
L178            4 SEA ABB=ON  PLU=ON  L147 AND L177

     FILE 'MEDLINE' ENTERED AT 14:59:22 ON 17 JUL 2006
L179            3 SEA ABB=ON  PLU=ON  L121 AND L122

     FILE 'HCAPLUS' ENTERED AT 15:00:01 ON 17 JUL 2006
L180           12 SEA ABB=ON  PLU=ON  (L77 OR L78)
L181            7 SEA ABB=ON  PLU=ON  L54 OR L56 OR L71
L182            4 SEA ABB=ON  PLU=ON  L180 AND L181

     FILE 'STNGUIDE' ENTERED AT 15:00:33 ON 17 JUL 2006

     FILE 'USPATFULL' ENTERED AT 15:01:27 ON 17 JUL 2006
L183         5870 SEA ABB=ON  PLU=ON  L31
L184         2355 SEA ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L185            6 SEA ABB=ON  PLU=ON  L183 AND L184
                  D SCA
L*** DEL        0 S L31 (L) THU/RL
                  D KWIC 1-6
L186         1795 SEA ABB=ON  PLU=ON  L39
L187            1 SEA ABB=ON  PLU=ON  L185 AND L186

     FILE 'WPIX' ENTERED AT 15:05:21 ON 17 JUL 2006
L188          247 SEA ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/BIX
L189         5402 SEA ABB=ON  PLU=ON  WANG S?/AU
L190            0 SEA ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L191            3 SEA ABB=ON  PLU=ON  SHACKELFORD R?/AU
L192            1 SEA ABB=ON  PLU=ON  L189 AND (L190 OR L191)
                  D SCA
                  SEL DCN
L193            0 SEA ABB=ON  PLU=ON  (RAAMBT/DCR OR RAGNQ8/DCR OR RA0DFA/DCR OR
                  RA0EMC/DCR OR RA0JBK/DCR OR RA00TF/DCR OR RA0055/DCR OR
                  RA021P/DCR OR RA0529/DCR OR RA1HHQ/DCR OR RA1XA5/DCR OR
                  RA37W9/DCR OR R00064/DCR OR R00195/DCR OR R00268/DCR OR
                  R00971/DCR OR R01179/DCR OR R01318/DCR OR R01319/DCR OR
                  R03811/DCR OR R03812/DCR OR R03949/DCR OR R04870/DCR OR
                  R06069/DCR OR R06174/DCR OR R06413/DCR OR R06747/DCR OR
                  R07001/DCR OR R07027/DCR OR R08105/DCR OR R08504/DCR OR
                  R09163/DCR OR R09222/DCR OR R09884/DCR OR R11605/DCR OR
                  R19085/DCR OR R19452/DCR OR R20811/DCR OR R22037/DCR)
L194            0 SEA ABB=ON  PLU=ON  (RAAMBT/DCRE OR RAGNQ8/DCRE OR RA0DFA/DCRE
                  OR RA0EMC/DCRE OR RA0JBK/DCRE OR RA00TF/DCRE OR RA0055/DCRE OR
                  RA021P/DCRE OR RA0529/DCRE OR RA1HHQ/DCRE OR RA1XA5/DCRE OR
                  RA37W9/DCRE OR R00064/DCRE OR R00195/DCRE OR R00268/DCRE OR
                  R00971/DCRE OR R01179/DCRE OR R01318/DCRE OR R01319/DCRE OR
                  R03811/DCRE OR R03812/DCRE OR R03949/DCRE OR R04870/DCRE OR
                  R06069/DCRE OR R06174/DCRE OR R06413/DCRE OR R06747/DCRE OR
                  R07001/DCRE OR R07027/DCRE OR R08105/DCRE OR R08504/DCRE OR
                  R09163/DCRE OR R09222/DCRE OR R09884/DCRE OR R11605/DCRE OR
```

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              R19085/DCRE OR R19452/DCRE OR R20811/DCRE OR R22037/DCRE)

     FILE 'STNGUIDE' ENTERED AT 15:09:00 ON 17 JUL 2006

     FILE 'WPIX' ENTERED AT 15:09:49 ON 17 JUL 2006
L195        5533 SEA ABB=ON  PLU=ON  (RAAMBT/DCN OR RAGNQ8/DCN OR RA0DFA/DCN OR
                 RA0EMC/DCN OR RA0JBK/DCN OR RA00TF/DCN OR RA0055/DCN OR
                 RA021P/DCN OR RA0529/DCN OR RA1HHQ/DCN OR RA1XA5/DCN OR
                 RA37W9/DCN OR R00064/DCN OR R00195/DCN OR R00268/DCN OR
                 R00971/DCN OR R01179/DCN OR R01318/DCN OR R01319/DCN OR
                 R03811/DCN OR R03812/DCN OR R03949/DCN OR R04870/DCN OR
                 R06069/DCN OR R06174/DCN OR R06413/DCN OR R06747/DCN OR
                 R07001/DCN OR R07027/DCN OR R08105/DCN OR R08504/DCN OR
                 R09163/DCN OR R09222/DCN OR R09884/DCN OR R11605/DCN OR
                 R19085/DCN OR R19452/DCN OR R20811/DCN OR R22037/DCN)
L196           0 SEA ABB=ON  PLU=ON  L188 AND (L189 OR L190 OR L191)
L197           2 SEA ABB=ON  PLU=ON  L188 AND L195
                 D SCA
                 D HIT L197 1-2
                 SEL HIT DCN
L198         623 SEA ABB=ON  PLU=ON  (R06069-/DCN OR R00971-/DCN OR RA0055-/DCN
                 OR R06069/DCN OR RA0055/DCN)
L199           0 SEA ABB=ON  PLU=ON  (R06069-/DRN OR R00971-/DRN OR RA0055-/DRN
                 OR R06069/DRN OR RA0055/DRN)
L200           0 SEA ABB=ON  PLU=ON  (R06069-/SDCE OR R00971-/SDCE OR RA0055-/SD
                 CE OR R06069/SDCE OR RA0055/SDCE)
L201           0 SEA ABB=ON  PLU=ON  (R06069-/SDRN OR R00971-/SDRN OR RA0055-/SD
                 RN OR R06069/SDRN OR RA0055/SDRN)

     FILE 'STNGUIDE' ENTERED AT 15:14:29 ON 17 JUL 2006

     FILE 'USPATFULL' ENTERED AT 15:14:54 ON 17 JUL 2006
L202        1992 SEA ABB=ON  PLU=ON  WANG S?/AU
L203           5 SEA ABB=ON  PLU=ON  SHACKELFORD R?/AU
L204           3 SEA ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L205           1 SEA ABB=ON  PLU=ON  L202 AND (L203 OR L204)
L206           1 SEA ABB=ON  PLU=ON  (L202 OR L203 OR L204) AND (L185 OR L187)

     FILE 'WPIX' ENTERED AT 15:15:49 ON 17 JUL 2006
L207           0 SEA ABB=ON  PLU=ON  L197 AND ((L189 OR L190 OR L191))

     FILE 'STNGUIDE' ENTERED AT 15:16:36 ON 17 JUL 2006
                 D COST

     FILE 'STNGUIDE' ENTERED AT 15:16:46 ON 17 JUL 2006

     FILE 'REGISTRY' ENTERED AT 15:22:10 ON 17 JUL 2006

     FILE 'HCAPLUS' ENTERED AT 15:22:11 ON 17 JUL 2006
                 D QUE L77
                 D QUE L78
                 D QUE L182
L208          12 SEA ABB=ON  PLU=ON  (L77 OR L78) OR L182

     FILE 'MEDLINE' ENTERED AT 15:22:15 ON 17 JUL 2006
                 D QUE L82
                 D QUE L87
                 D QUE L179
L209          13 SEA ABB=ON  PLU=ON  L82 OR L87 OR L179
```

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     FILE 'EMBASE' ENTERED AT 15:22:20 ON 17 JUL 2006
                D QUE L127
                D QUE L135
                D QUE L178
L210           11 SEA ABB=ON  PLU=ON  L127 OR L135 OR L178

     FILE 'BIOSIS' ENTERED AT 15:22:24 ON 17 JUL 2006
                D QUE L154
                D QUE L156
                D QUE L176
L211           18 SEA ABB=ON  PLU=ON  L154 OR L156 OR L176

     FILE 'USPATFULL' ENTERED AT 15:22:28 ON 17 JUL 2006
                D QUE L205
                D QUE L206
L212            1 SEA ABB=ON  PLU=ON  L205 OR L206

     FILE 'WPIX' ENTERED AT 15:22:31 ON 17 JUL 2006
                D QUE L192
                D QUE L196
                D QUE L207
L213            1 SEA ABB=ON  PLU=ON  L192 OR L196 OR L207

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, USPATFULL, WPIX' ENTERED AT
     15:23:43 ON 17 JUL 2006
L214           22 DUP REM L208 L209 L210 L211 L212 L213 (34 DUPLICATES REMOVED)
                      ANSWERS '1-12' FROM FILE HCAPLUS
                      ANSWERS '13-15' FROM FILE MEDLINE
                      ANSWERS '16-22' FROM FILE BIOSIS

     FILE 'STNGUIDE' ENTERED AT 15:23:57 ON 17 JUL 2006

     FILE 'HCAPLUS, MEDLINE, BIOSIS' ENTERED AT 15:24:47 ON 17 JUL 2006
                D IBIB ABS HITIND HITSTR L214 1-12

     FILE 'STNGUIDE' ENTERED AT 15:24:50 ON 17 JUL 2006

     FILE 'HCAPLUS, MEDLINE, BIOSIS' ENTERED AT 15:25:01 ON 17 JUL 2006
                D IALL L214 13-22

     FILE 'STNGUIDE' ENTERED AT 15:25:02 ON 17 JUL 2006

     FILE 'STNGUIDE' ENTERED AT 15:25:52 ON 17 JUL 2006

     FILE 'HCAPLUS' ENTERED AT 15:30:14 ON 17 JUL 2006
                D QUE L54
                D QUE L56
                D QUE L71
L215            3 SEA ABB=ON  PLU=ON  (L54 OR L56 OR L71) NOT L208

     FILE 'MEDLINE' ENTERED AT 15:30:19 ON 17 JUL 2006
                D QUE L96
                D QUE L98
                D QUE L105
                D QUE L108
                D QUE L119
L216            7 SEA ABB=ON  PLU=ON  (L96 OR L98 OR L105 OR L108 OR L119) NOT
                  L209

     FILE 'EMBASE' ENTERED AT 15:30:24 ON 17 JUL 2006
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```
              D QUE L139
              D QUE L142
              D QUE L145
              D QUE L150
L217         10 SEA ABB=ON  PLU=ON  (L139 OR L142 OR L145 OR L150) NOT L210

     FILE 'BIOSIS' ENTERED AT 15:30:29 ON 17 JUL 2006
              D QUE L168
              D QUE L172
              D QUE L173
L218          3 SEA ABB=ON  PLU=ON  (L168 OR L172 OR L173) NOT L211

     FILE 'USPATFULL' ENTERED AT 15:30:33 ON 17 JUL 2006
              D QUE L185
              D QUE L187
L219          5 SEA ABB=ON  PLU=ON  (L185 OR L187) NOT L212

     FILE 'WPIX' ENTERED AT 15:30:37 ON 17 JUL 2006
              D QUE L197
L220          2 SEA ABB=ON  PLU=ON  L197 NOT L213

     FILE 'STNGUIDE' ENTERED AT 15:31:04 ON 17 JUL 2006

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, USPATFULL, WPIX' ENTERED AT
     15:31:21 ON 17 JUL 2006
L221         24 DUP REM L215 L216 L217 L218 L219 L220 (6 DUPLICATES REMOVED)
                    ANSWERS '1-3' FROM FILE HCAPLUS
                    ANSWERS '4-9' FROM FILE MEDLINE
                    ANSWERS '10-16' FROM FILE EMBASE
                    ANSWER '17' FROM FILE BIOSIS
                    ANSWERS '18-22' FROM FILE USPATFULL
                    ANSWERS '23-24' FROM FILE WPIX
               D IBIB ABS HITIND HITSTR L221 1-3
               D IALL L221 4-17
               D IBIB ABS KWIC HITSTR L221 18-22
               D IALL IND L221 23-24


     FILE HOME

     FILE REGISTRY
     Property values tagged with IC are from the ZIC/VINITI data file
     provided by InfoChem.

     STRUCTURE FILE UPDATES:   14 JUL 2006  HIGHEST RN 892755-86-1
     DICTIONARY FILE UPDATES:  14 JUL 2006  HIGHEST RN 892755-86-1

     New CAS Information Use Policies, enter HELP USAGETERMS for details.

     TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

       Please note that search-term pricing does apply when
       conducting SmartSELECT searches.

     REGISTRY includes numerically searchable data for experimental and
     predicted properties as well as tags indicating availability of
     experimental property data in the original document.  For information
     on property searching in REGISTRY, refer to:

     http://www.cas.org/ONLINE/UG/regprops.html
```

FILE STNGUIDE
FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jul 17, 2006 (20060717/UP).

FILE HCAPLUS

FILE COVERS 1907 - 17 Jul 2006 VOL 145 ISS 4
FILE LAST UPDATED: 16 Jul 2006 (20060716/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE MEDLINE
FILE LAST UPDATED: 15 JUL 2006 (20060715/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE EMBASE
FILE COVERS 1974 TO 17 Jul 2006 (20060717/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS
FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 12 July 2006 (20060712/ED)

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 13 Jul 2006 (20060713/PD)
FILE LAST UPDATED: 13 Jul 2006 (20060713/ED)
HIGHEST GRANTED PATENT NUMBER: US7076805
HIGHEST APPLICATION PUBLICATION NUMBER: US2006156447
CA INDEXING IS CURRENT THROUGH 11 Jul 2006 (20060711/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 13 Jul 2006 (20060713/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2006
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2006

FILE WPIX
FILE LAST UPDATED: 14 JUL 2006 <20060714/UP>
MOST RECENT DERWENT UPDATE: 200645 <200645/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://scientific.thomson.com/support/patents/coverage/latestupdates/

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html and
http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<

>>> FOR FURTHER DETAILS ON THE FORTHCOMING DERWENT WORLD PATENTS
INDEX ENHANCEMENTS PLEASE VISIT:
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<

=>

```
=> file registry
FILE 'REGISTRY' ENTERED AT 15:22:10 ON 17 JUL 2006
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STRUCTURE FILE UPDATES:   14 JUL 2006  HIGHEST RN 892755-86-1
DICTIONARY FILE UPDATES:  14 JUL 2006  HIGHEST RN 892755-86-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 15:22:11 ON 17 JUL 2006
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FILE COVERS 1907 - 17 Jul 2006  VOL 145 ISS 4
FILE LAST UPDATED: 16 Jul 2006  (20060716/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que L77

L74       29887 SEA FILE=HCAPLUS ABB=ON  PLU=ON  WANG S?/AU
L75          49 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SHACKELFORD R?/AU
L76          12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L77           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L74 AND (L75 OR L76)
```

```
=> d que l78

L42         1665 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/OBI
L43         2356 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/BI
L44            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS BAR/OBI
L45            8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS BAR/BI
L46            8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS-BAR/BI
L47            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CEREBELLO OCULOCUTANEOUS
                 TELANGIECT?/BI
L48            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CEREBELLO OCULOT?/BI
L49         2363 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (ATAXIA (2A) TELANGIECT?)/BI
L52         2369 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L42 OR L43 OR L44 OR L45 OR
                 L46 OR L47 OR L48 OR L49)
L74        29887 SEA FILE=HCAPLUS ABB=ON  PLU=ON  WANG S?/AU
L75           49 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SHACKELFORD R?/AU
L76           12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L78           12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 AND (L74 OR L75 OR L76)


=> d que L182

L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7             6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6)
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                 OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22            4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                 C?/CN
L23           23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                 L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31           24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L37           22 SEA FILE=REGISTRY ABB=ON  PLU=ON  (117-39-5/BI OR 146426-40-6/B
                 I OR 153-18-4/BI OR 17912-87-7/BI OR 446-72-0/BI OR 480-16-0/BI
                  OR 480-18-2/BI OR 480-40-0/BI OR 480-41-1/BI OR 482-39-3/BI
                 OR 490-46-0/BI OR 491-70-3/BI OR 491-80-5/BI OR 50-78-2/BI OR
                 520-26-3/BI OR 520-27-4/BI OR 520-33-2/BI OR 520-36-5/BI OR
                 522-12-3/BI OR 525-82-6/BI OR 577-85-5/BI OR 989-51-5/BI)
L38            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  50-78-2
L39           21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 NOT L38
```

```
L42         1665 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/OBI
L43         2356 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/BI
L44            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS BAR/OBI
L45            8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS BAR/BI
L46            8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS-BAR/BI
L47            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CEREBELLO OCULOCUTANEOUS
                  TELANGIECT?/BI
L48            0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CEREBELLO OCULOT?/BI
L49         2363 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (ATAXIA (2A) TELANGIECT?)/BI
L50        15362 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CHELATING AGENTS+OLD,NT/CT
L51        40989 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31
L52         2369 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L42 OR L43 OR L44 OR L45 OR
                  L46 OR L47 OR L48 OR L49)
L53        52491 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L50 OR L51)
L54            7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 AND L53
L55        34358 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L39
L56            4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L54 AND L55
L68        15322 SEA FILE=HCAPLUS ABB=ON  PLU=ON  HYDROXAMIC ACIDS+NT/CT
L69           29 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L68 AND L52
L70       132130 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CHELAT?/BI
L71            3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L69 AND L70
L74        29887 SEA FILE=HCAPLUS ABB=ON  PLU=ON  WANG S?/AU
L75           49 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SHACKELFORD R?/AU
L76           12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L77            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L74 AND (L75 OR L76)
L78           12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 AND (L74 OR L75 OR L76)
L180          12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L77 OR L78)
L181           7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L54 OR L56 OR L71
L182           4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L180 AND L181


=> s L77-L78 or L182

L208          12 (L77 OR L78) OR L182

=> file medline

FILE 'MEDLINE' ENTERED AT 15:22:15 ON 17 JUL 2006

 FILE LAST UPDATED: 15 JUL 2006 (20060715/UP).  FILE COVERS 1950 TO DATE.

 On December 11, 2005, the 2006 MeSH terms were loaded.

 The MEDLINE reload for 2006 is now (26 Feb.) available.  For details
 on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).
 See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

 OLDMEDLINE is covered back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2006 vocabulary.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.
```

```
=> d que L82

L79         9295 SEA FILE=MEDLINE ABB=ON  PLU=ON  WANG S?/AU
L80           81 SEA FILE=MEDLINE ABB=ON  PLU=ON  SHACKELFORD R?/AU
L81           10 SEA FILE=MEDLINE ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L82            3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L79 AND (L80 OR L81)


=> d que L87

L79         9295 SEA FILE=MEDLINE ABB=ON  PLU=ON  WANG S?/AU
L80           81 SEA FILE=MEDLINE ABB=ON  PLU=ON  SHACKELFORD R?/AU
L81           10 SEA FILE=MEDLINE ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L83         2457 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/CT
L84         3932 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L85         3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA (2A) TELANGIECTASIA
L86         3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L83 OR L84 OR L85)
L87           13 SEA FILE=MEDLINE ABB=ON  PLU=ON  L86 AND (L79 OR L80 OR L81)


=> d que l179

L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7             6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6)
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                 OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22            4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                 C?/CN
L23           23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                 L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31           24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L37           22 SEA FILE=REGISTRY ABB=ON  PLU=ON  (117-39-5/BI OR 146426-40-6/B
                 I OR 153-18-4/BI OR 17912-87-7/BI OR 446-72-0/BI OR 480-16-0/BI
                  OR 480-18-2/BI OR 480-40-0/BI OR 480-41-1/BI OR 482-39-3/BI
                 OR 490-46-0/BI OR 491-70-3/BI OR 491-80-5/BI OR 50-78-2/BI OR
                 520-26-3/BI OR 520-27-4/BI OR 520-33-2/BI OR 520-36-5/BI OR
                 522-12-3/BI OR 525-82-6/BI OR 577-85-5/BI OR 989-51-5/BI)
L38            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  50-78-2
L39           21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 NOT L38
```

```
L79         9295 SEA FILE=MEDLINE ABB=ON  PLU=ON  WANG S?/AU
L80           81 SEA FILE=MEDLINE ABB=ON  PLU=ON  SHACKELFORD R?/AU
L81           10 SEA FILE=MEDLINE ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L82            3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L79 AND (L80 OR L81)
L83         2457 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/CT
L84         3932 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L85         3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA (2A) TELANGIECTASIA
L86         3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L83 OR L84 OR L85)
L87           13 SEA FILE=MEDLINE ABB=ON  PLU=ON  L86 AND (L79 OR L80 OR L81)
L88        13204 SEA FILE=MEDLINE ABB=ON  PLU=ON  CHELATING AGENTS/CT
L89        92986 SEA FILE=MEDLINE ABB=ON  PLU=ON  CHELATING AGENTS+NT/CT
L90         3231 SEA FILE=MEDLINE ABB=ON  PLU=ON  IRON CHELATING AGENTS/CT
L91        19528 SEA FILE=MEDLINE ABB=ON  PLU=ON  IRON CHELATING AGENTS+NT/CT
L92         1267 SEA FILE=MEDLINE ABB=ON  PLU=ON  SIDEROPHORES/CT
L93         6055 SEA FILE=MEDLINE ABB=ON  PLU=ON  SIDEROPHORES+NT/CT
L94              SEL  PLU=ON  L31 1- CHEM :     255 TERMS
L95        68933 SEA FILE=MEDLINE ABB=ON  PLU=ON  L94
L96            7 SEA FILE=MEDLINE ABB=ON  PLU=ON  L86 AND ((L88 OR L89 OR L90
                 OR L91 OR L92 OR L93) OR L95)
L97        37091 SEA FILE=MEDLINE ABB=ON  PLU=ON  CHELAT?
L98            5 SEA FILE=MEDLINE ABB=ON  PLU=ON  L86 AND L97
L100       61053 SEA FILE=MEDLINE ABB=ON  PLU=ON  ANTIOXID?
L101       18939 SEA FILE=MEDLINE ABB=ON  PLU=ON  FLAV!NOID?/BI
L102       32882 SEA FILE=MEDLINE ABB=ON  PLU=ON  FLAVONOIDS+NT/CT
L103             QUE  ABB=ON  PLU=ON  TRANSITION ELEMENTS+NT/CT
L105           3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L96 AND ((L100 OR L101 OR
                 L102 OR L103))
L106             SEL  PLU=ON  L39 1- CHEM :     344 TERMS
L107       19788 SEA FILE=MEDLINE ABB=ON  PLU=ON  L106
L108           2 SEA FILE=MEDLINE ABB=ON  PLU=ON  L107 AND L96
L109             QUE  ABB=ON  PLU=ON  FERRIOXAMIN? OR DEFEROXAMIN? OR DESF
                 ERROXAMIN? OR DEFERRIOXAMIN?
L110             QUE  ABB=ON  PLU=ON  EDETIC ACID/CT
L111             QUE  ABB=ON  PLU=ON  CP94
L112             QUE  ABB=ON  PLU=ON  HYDROXAMIC ACIDS/CT
L113             QUE  ABB=ON  PLU=ON  APOFERRITIN/CT
L114             QUE  ABB=ON  PLU=ON  CDTA
L115             QUE  ABB=ON  PLU=ON  DTPA OR PENTATIC ACID
L116             QUE  ABB=ON  PLU=ON  PENICILLAMINE
L117             QUE  ABB=ON  PLU=ON  BATHOCUPROINE
L118             QUE  ABB=ON  PLU=ON  BATHOCUPROIN
L119           6 SEA FILE=MEDLINE ABB=ON  PLU=ON  L86 AND (L109 OR L110 OR L111
                 OR L112 OR L113 OR L114 OR L115 OR L116 OR L117 OR L118)
L120           1 SEA FILE=MEDLINE ABB=ON  PLU=ON  L119 AND L107
L121          13 SEA FILE=MEDLINE ABB=ON  PLU=ON  L82 OR L87
L122          10 SEA FILE=MEDLINE ABB=ON  PLU=ON  L96 OR L98 OR L105 OR L108 OR
                 L119 OR L120
L179           3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L121 AND L122


=> s L82 or L87 or L179

L209          13 L82 OR L87 OR L179

=> file embase

FILE 'EMBASE' ENTERED AT 15:22:20 ON 17 JUL 2006
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 FILE COVERS 1974 TO 17 Jul 2006 (20060717/ED)
```

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que L127

```
L124        7035 SEA FILE=EMBASE ABB=ON  PLU=ON  WANG S?/AU
L125           5 SEA FILE=EMBASE ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L126          27 SEA FILE=EMBASE ABB=ON  PLU=ON  SHACKELFORD R?/AU
L127           4 SEA FILE=EMBASE ABB=ON  PLU=ON  L124 AND (L125 OR L126)
```

=> d que L135

```
L124        7035 SEA FILE=EMBASE ABB=ON  PLU=ON  WANG S?/AU
L125           5 SEA FILE=EMBASE ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L126          27 SEA FILE=EMBASE ABB=ON  PLU=ON  SHACKELFORD R?/AU
L128        2332 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA+UF/CT
L129        3044 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L130          62 SEA FILE=EMBASE ABB=ON  PLU=ON  LOUIS BAR
L131           2 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTATICA
L132           0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLOOCULOCU
                 TANEA
L133           0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLO
                 OCULOCUTANEA
L134        3053 SEA FILE=EMBASE ABB=ON  PLU=ON  (L128 OR L129 OR L130 OR L131
                 OR L132 OR L133)
L135          11 SEA FILE=EMBASE ABB=ON  PLU=ON  (L124 OR L125 OR L126) AND
                 L134
```

=> d que L178

```
L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7             6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6)
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                 OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
```

```
L21           6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22           4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                C?/CN
L23          23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31          24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L37          22 SEA FILE=REGISTRY ABB=ON  PLU=ON  (117-39-5/BI OR 146426-40-6/B
                I OR 153-18-4/BI OR 17912-87-7/BI OR 446-72-0/BI OR 480-16-0/BI
                 OR 480-18-2/BI OR 480-40-0/BI OR 480-41-1/BI OR 482-39-3/BI
                OR 490-46-0/BI OR 491-70-3/BI OR 491-80-5/BI OR 50-78-2/BI OR
                520-26-3/BI OR 520-27-4/BI OR 520-33-2/BI OR 520-36-5/BI OR
                522-12-3/BI OR 525-82-6/BI OR 577-85-5/BI OR 989-51-5/BI)
L38           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  50-78-2
L39          21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 NOT L38
L124       7035 SEA FILE=EMBASE ABB=ON  PLU=ON  WANG S?/AU
L125          5 SEA FILE=EMBASE ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L126         27 SEA FILE=EMBASE ABB=ON  PLU=ON  SHACKELFORD R?/AU
L127          4 SEA FILE=EMBASE ABB=ON  PLU=ON  L124 AND (L125 OR L126)
L128       2332 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA+UF/CT
L129       3044 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L130         62 SEA FILE=EMBASE ABB=ON  PLU=ON  LOUIS BAR
L131          2 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTATICA
L132          0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLOOCULOCU
                TANEA
L133          0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLO
                OCULOCUTANEA
L134       3053 SEA FILE=EMBASE ABB=ON  PLU=ON  (L128 OR L129 OR L130 OR L131
                OR L132 OR L133)
L135         11 SEA FILE=EMBASE ABB=ON  PLU=ON  (L124 OR L125 OR L126) AND
                L134
L136      98621 SEA FILE=EMBASE ABB=ON  PLU=ON  CHELATING AGENT+NT/CT
L137            SEL  PLU=ON  L31 1- CHEM :      255 TERMS
L138      61283 SEA FILE=EMBASE ABB=ON  PLU=ON  L137
L139         14 SEA FILE=EMBASE ABB=ON  PLU=ON  L134 AND (L136 OR L138)
L140      25033 SEA FILE=EMBASE ABB=ON  PLU=ON  FLAVONOID+NT/CT
L141      35447 SEA FILE=EMBASE ABB=ON  PLU=ON  ANTIOXIDANT+NT/CT
L142          4 SEA FILE=EMBASE ABB=ON  PLU=ON  L139 AND (L140 OR L141)
L143            SEL  PLU=ON  L39 1- CHEM :      344 TERMS
L144      24101 SEA FILE=EMBASE ABB=ON  PLU=ON  L143
L145          2 SEA FILE=EMBASE ABB=ON  PLU=ON  L139 AND L144
L146         14 SEA FILE=EMBASE ABB=ON  PLU=ON  L139 OR L142 OR L145
L147         11 SEA FILE=EMBASE ABB=ON  PLU=ON  L127 OR L135
L149      31221 SEA FILE=EMBASE ABB=ON  PLU=ON  CHELAT?
L150          4 SEA FILE=EMBASE ABB=ON  PLU=ON  L149 AND L134
L177         14 SEA FILE=EMBASE ABB=ON  PLU=ON  L146 OR L150
L178          4 SEA FILE=EMBASE ABB=ON  PLU=ON  L147 AND L177


=> s L127 or L135 or L178

L210         11 L127 OR L135 OR L178

=> file biosis

FILE 'BIOSIS' ENTERED AT 15:22:24 ON 17 JUL 2006
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FILE COVERS 1969 TO DATE.
```

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 12 July 2006 (20060712/ED)

=> d que L154

```
L151      10521 SEA FILE=BIOSIS ABB=ON  PLU=ON  WANG S?/AU
L152         52 SEA FILE=BIOSIS ABB=ON  PLU=ON  SHACKELFORD R?/AU
L153          7 SEA FILE=BIOSIS ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L154          6 SEA FILE=BIOSIS ABB=ON  PLU=ON  L151 AND (L152 OR L153)
```

=> d que L156

```
L151      10521 SEA FILE=BIOSIS ABB=ON  PLU=ON  WANG S?/AU
L152         52 SEA FILE=BIOSIS ABB=ON  PLU=ON  SHACKELFORD R?/AU
L153          7 SEA FILE=BIOSIS ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L155       3180 SEA FILE=BIOSIS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L156         18 SEA FILE=BIOSIS ABB=ON  PLU=ON  (L151 OR L152 OR L153) AND
                L155
```

=> d que L176

```
L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6)
L8            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21           6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22           4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                C?/CN
L23          23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31          24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L37          22 SEA FILE=REGISTRY ABB=ON  PLU=ON  (117-39-5/BI OR 146426-40-6/B
                I OR 153-18-4/BI OR 17912-87-7/BI OR 446-72-0/BI OR 480-16-0/BI
                 OR 480-18-2/BI OR 480-40-0/BI OR 480-41-1/BI OR 482-39-3/BI
                OR 490-46-0/BI OR 491-70-3/BI OR 491-80-5/BI OR 50-78-2/BI OR
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                520-26-3/BI OR 520-27-4/BI OR 520-33-2/BI OR 520-36-5/BI OR
                522-12-3/BI OR 525-82-6/BI OR 577-85-5/BI OR 989-51-5/BI)
L38           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  50-78-2
L39          21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 NOT L38
L151      10521 SEA FILE=BIOSIS ABB=ON  PLU=ON  WANG S?/AU
L152         52 SEA FILE=BIOSIS ABB=ON  PLU=ON  SHACKELFORD R?/AU
L153          7 SEA FILE=BIOSIS ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L154          6 SEA FILE=BIOSIS ABB=ON  PLU=ON  L151 AND (L152 OR L153)
L155       3180 SEA FILE=BIOSIS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L156         18 SEA FILE=BIOSIS ABB=ON  PLU=ON  (L151 OR L152 OR L153) AND
                L155
L157      38028 SEA FILE=BIOSIS ABB=ON  PLU=ON  CHELAT?
L158            SEL  PLU=ON  L31 1- CHEM :      255 TERMS
L159      59051 SEA FILE=BIOSIS ABB=ON  PLU=ON  L158
L160       3182 SEA FILE=BIOSIS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA?
L161       4049 SEA FILE=BIOSIS ABB=ON  PLU=ON  TRANSITION METAL?
L162        160 SEA FILE=BIOSIS ABB=ON  PLU=ON  TRANSITION ELEM?
L163       3396 SEA FILE=BIOSIS ABB=ON  PLU=ON  SIDEROPHOR?
L164         42 SEA FILE=BIOSIS ABB=ON  PLU=ON  SIDEROCHROM?
L165         72 SEA FILE=BIOSIS ABB=ON  PLU=ON  LOUIS BAR
L166       3223 SEA FILE=BIOSIS ABB=ON  PLU=ON  L155 OR L160 OR L165
L167            QUE  ABB=ON  PLU=ON  L157 OR (L163 OR L164) OR L159
L168          7 SEA FILE=BIOSIS ABB=ON  PLU=ON  L166 AND L167
L170            SEL  PLU=ON  L39 1- CHEM :      344 TERMS
L171      31206 SEA FILE=BIOSIS ABB=ON  PLU=ON  L170
L172          3 SEA FILE=BIOSIS ABB=ON  PLU=ON  L171 AND L168
L173          0 SEA FILE=BIOSIS ABB=ON  PLU=ON  L168 AND (L161 OR L162)
L174         18 SEA FILE=BIOSIS ABB=ON  PLU=ON  L154 OR L156
L175          7 SEA FILE=BIOSIS ABB=ON  PLU=ON  L168 OR L172 OR L173
L176          4 SEA FILE=BIOSIS ABB=ON  PLU=ON  L174 AND L175


=> s L154 or L156 or L176

L211         18 L154 OR L156 OR L176

=> file uspatfull

FILE 'USPATFULL' ENTERED AT 15:22:28 ON 17 JUL 2006
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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 13 Jul 2006 (20060713/PD)
FILE LAST UPDATED: 13 Jul 2006 (20060713/ED)
HIGHEST GRANTED PATENT NUMBER: US7076805
HIGHEST APPLICATION PUBLICATION NUMBER: US2006156447
CA INDEXING IS CURRENT THROUGH 11 Jul 2006 (20060711/UPCA)
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REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2006
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2006


=> d que L205

L202       1992 SEA FILE=USPATFULL ABB=ON  PLU=ON  WANG S?/AU
L203          5 SEA FILE=USPATFULL ABB=ON  PLU=ON  SHACKELFORD R?/AU
L204          3 SEA FILE=USPATFULL ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L205          1 SEA FILE=USPATFULL ABB=ON  PLU=ON  L202 AND (L203 OR L204)


=> d que L206
```

```
L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6)
L8            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21           6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22           4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                C?/CN
L23          23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31          24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L37          22 SEA FILE=REGISTRY ABB=ON  PLU=ON  (117-39-5/BI OR 146426-40-6/B
                I OR 153-18-4/BI OR 17912-87-7/BI OR 446-72-0/BI OR 480-16-0/BI
                 OR 480-18-2/BI OR 480-40-0/BI OR 480-41-1/BI OR 482-39-3/BI
                OR 490-46-0/BI OR 491-70-3/BI OR 491-80-5/BI OR 50-78-2/BI OR
                520-26-3/BI OR 520-27-4/BI OR 520-33-2/BI OR 520-36-5/BI OR
                522-12-3/BI OR 525-82-6/BI OR 577-85-5/BI OR 989-51-5/BI)
L38           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  50-78-2
L39          21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 NOT L38
L183       5870 SEA FILE=USPATFULL ABB=ON  PLU=ON  L31
L184       2355 SEA FILE=USPATFULL ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L185          6 SEA FILE=USPATFULL ABB=ON  PLU=ON  L183 AND L184
L186       1795 SEA FILE=USPATFULL ABB=ON  PLU=ON  L39
L187          1 SEA FILE=USPATFULL ABB=ON  PLU=ON  L185 AND L186
L202       1992 SEA FILE=USPATFULL ABB=ON  PLU=ON  WANG S?/AU
L203          5 SEA FILE=USPATFULL ABB=ON  PLU=ON  SHACKELFORD R?/AU
L204          3 SEA FILE=USPATFULL ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L206          1 SEA FILE=USPATFULL ABB=ON  PLU=ON  (L202 OR L203 OR L204) AND
                (L185 OR L187)


=> s L205 or L206

L212          1 L205 OR L206

=> file wpix

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FILE LAST UPDATED:          14 JUL 2006      <20060714/UP>
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'BIX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> d que L192

L189       5402 SEA FILE=WPIX ABB=ON  PLU=ON  WANG S?/AU
L190          0 SEA FILE=WPIX ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L191          3 SEA FILE=WPIX ABB=ON  PLU=ON  SHACKELFORD R?/AU
L192          1 SEA FILE=WPIX ABB=ON  PLU=ON  L189 AND (L190 OR L191)


=> d que L196

L188        247 SEA FILE=WPIX ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/BIX
L189       5402 SEA FILE=WPIX ABB=ON  PLU=ON  WANG S?/AU
L190          0 SEA FILE=WPIX ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L191          3 SEA FILE=WPIX ABB=ON  PLU=ON  SHACKELFORD R?/AU
L196          0 SEA FILE=WPIX ABB=ON  PLU=ON  L188 AND (L189 OR L190 OR L191)


=> d que L207

L188        247 SEA FILE=WPIX ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/BIX
L189       5402 SEA FILE=WPIX ABB=ON  PLU=ON  WANG S?/AU
L190          0 SEA FILE=WPIX ABB=ON  PLU=ON  SHACKLEFORD R?/AU
L191          3 SEA FILE=WPIX ABB=ON  PLU=ON  SHACKELFORD R?/AU
L195       5533 SEA FILE=WPIX ABB=ON  PLU=ON  (RAAMBT/DCN OR RAGNQ8/DCN OR
                RA0DFA/DCN OR RA0EMC/DCN OR RA0JBK/DCN OR RA00TF/DCN OR
                RA0055/DCN OR RA021P/DCN OR RA0529/DCN OR RA1HHQ/DCN OR
                RA1XA5/DCN OR RA37W9/DCN OR R00064/DCN OR R00195/DCN OR
                R00268/DCN OR R00971/DCN OR R01179/DCN OR R01318/DCN OR
                R01319/DCN OR R03811/DCN OR R03812/DCN OR R03949/DCN OR
                R04870/DCN OR R06069/DCN OR R06174/DCN OR R06413/DCN OR
                R06747/DCN OR R07001/DCN OR R07027/DCN OR R08105/DCN OR
                R08504/DCN OR R09163/DCN OR R09222/DCN OR R09884/DCN OR
                R11605/DCN OR R19085/DCN OR R19452/DCN OR R20811/DCN OR
                R22037/DCN)
L197          2 SEA FILE=WPIX ABB=ON  PLU=ON  L188 AND L195
L207          0 SEA FILE=WPIX ABB=ON  PLU=ON  L197 AND ((L189 OR L190 OR
                L191))


=> s L192 or L196 or L207
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L213          1 L192 OR L196 OR L207

=> dup rem L208 L209 L210 L211 L212 L213
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PROCESSING COMPLETED FOR L213
L214          22 DUP REM L208 L209 L210 L211 L212 L213 (34 DUPLICATES REMOVED)
                 ANSWERS '1-12' FROM FILE HCAPLUS
                 ANSWERS '13-15' FROM FILE MEDLINE
                 ANSWERS '16-22' FROM FILE BIOSIS

=> => d ibib abs hitind hitstr L214 1-12; d iall L214 13-22
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L214 ANSWER 1 OF 22  HCAPLUS  COPYRIGHT 2006 ACS on STN DUPLICATE 2
ACCESSION NUMBER:         2005:34588  HCAPLUS
DOCUMENT NUMBER:          142:127600
TITLE:                    Methods and compositions using chelating
                          agents for treatment of ataxia-
                          telangiectasia and diseases associated with
                          oxidative stress and genomic instability
INVENTOR(S):              Wang, Suming; Shackelford, Rodney E.
PATENT ASSIGNEE(S):       USA
SOURCE:                   U.S. Pat. Appl. Publ., 37 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     --------------       ----   --------    --------------------    --------
     US 2005009760         A1    20050113    US 2003-617943          20030711
PRIORITY APPLN. INFO.:                       US 2003-617943          20030711
AB   This invention relates to the methods and pharmaceutical compns. for
     treating diseases or disorders associated with oxidative stress and/or
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genomic instability. In particular, the invention relates to methods for treating ***ataxia telangiectasia*** (AT) and such disease states by administering a therapeutically effective amount of a ***chelating*** agent to increase genomic stability and/or decrease oxidative stress. The ferrous iron ***chelating*** agent desferrioxamine was used to increase the genomic stability of ***ataxia telangiectasia*** cells.

IC ICM A61K031-7048
ICS A61K031-353; A61K031-198; A61K031-195

INCL 514027000; 514456000; 514566000

CC 1-10 (Pharmacology)
Section cross-reference(s): 63

ST ataxia telangeictasia treatment ***chelating*** agent; oxidative stress disease treatment ***chelating*** agent; genomic instability disease treatment ***chelating*** agent; desferrioxamine treatment ***ataxia telangiectasia***

IT Alkenes, biological studies
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alkatrienes, as ***chelating*** agent; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT Ferritins
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(apoferritins, as ***chelating*** agent; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT Flavonoids
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as antioxidant; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT ***Hydroxamic acids***
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as ***chelating*** agent, tri-,intermediates; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT Disease, animal
(associated with oxidative stress or genomic instability; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT Nervous system, disease
(***ataxia telangiectasia***; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT Cell membrane
(***chelating*** agent capable of crossing; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT Transition metals, biological studies
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(***chelating*** agents binding; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT Animals

Chelating agents
Combination chemotherapy
Drug delivery systems
Human
Oxidative stress, biological
(***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT Antioxidants
(further treatment with; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(instability; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT ***117-39-5***, Quercetin ***153-18-4***, Rutin ***446-72-0***, Genistein ***480-16-0***, Morin ***480-18-2***, Taxifolin ***480-40-0***, Chrysin ***480-41-1***, Naringenin ***482-39-3***, Afzelin ***490-46-0***, Epicatechin ***491-70-3***, Luteolin ***491-80-5***, Biochanin A ***520-26-3***, Hesperidin ***520-27-4***, Diosmin ***520-33-2***, Hesperetin ***520-36-5***, Apigenin ***522-12-3***, Quercitrin ***525-82-6***, Flavone ***577-85-5***, Flavonol ***989-51-5***, Epigallocatechin gallate ***17912-87-7***, Myricitrin ***146426-40-6***, Flavopiridol
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as antioxidant; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT ***52-67-5***, Penicillamine ***60-00-4***, EDTA, biological studies ***67-43-6***, Diethylenetriamine-N,N,N',N'',N''-pentaacetic acid ***70-51-9D***, Desferrioxamine, compds. ***138-14-7***, Desferal ***138-14-7D***, Desferrioxamine B mesylate, compds. ***13291-61-7***, trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraacetic acid ***14836-73-8***, Ferrioxamine ***73348-75-1*** ***115900-75-9***, CP94
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as ***chelating*** agent; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT 7439-89-6, Iron, biological studies 7440-50-8, Copper, biological studies
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(***chelating*** agent of; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

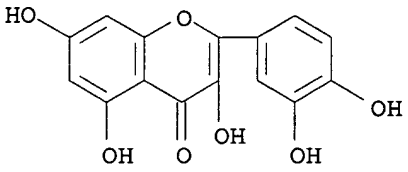
IT 75-91-2, tert-Butyl hydroperoxide 7447-39-4, Copper chloride (CuCl2), biological studies 7758-94-3, Ferrous chloride
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

IT 50-78-2, Aspirin ***70-51-9***, Desferrioxamine
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);

THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

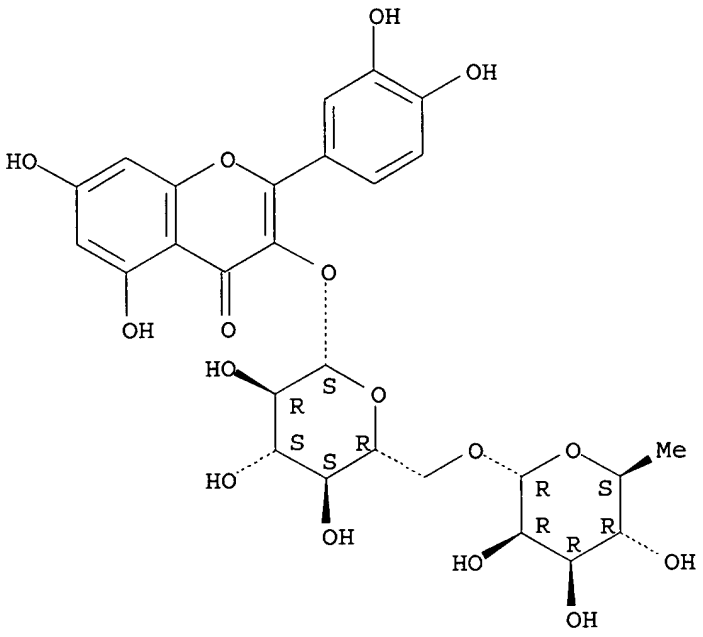
IT ***117-39-5***, Quercetin ***153-18-4***, Rutin ***446-72-0***, Genistein ***480-16-0***, Morin ***480-18-2***, Taxifolin ***480-40-0***, Chrysin ***480-41-1***, Naringenin ***482-39-3***, Afzelin ***490-46-0***, Epicatechin ***491-70-3***, Luteolin ***491-80-5***, Biochanin A ***520-26-3***, Hesperidin ***520-27-4***, Diosmin ***520-33-2***, Hesperetin ***520-36-5***, Apigenin ***522-12-3***, Quercitrin ***525-82-6***, Flavone ***577-85-5***, Flavonol ***989-51-5***, Epigallocatechin gallate ***17912-87-7***, Myricitrin ***146426-40-6***, Flavopiridol
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as antioxidant; ***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)

RN 117-39-5 HCAPLUS
CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy- (9CI) (CA INDEX NAME)

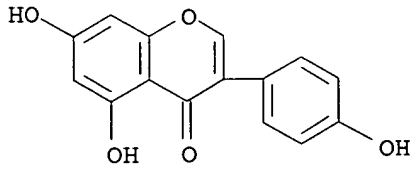


RN 153-18-4 HCAPLUS
CN 4H-1-Benzopyran-4-one, 3-[[6-O-(6-deoxy-α-L-mannopyranosyl)-β-D-glucopyranosyl]oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy- (9CI) (CA INDEX NAME)

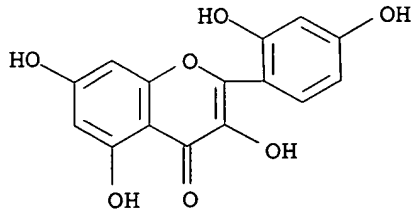
Absolute stereochemistry. Rotation (+).



RN 446-72-0 HCAPLUS
CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

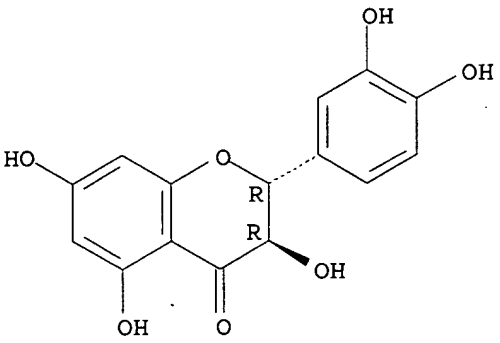


RN 480-16-0 HCAPLUS
CN 4H-1-Benzopyran-4-one, 2-(2,4-dihydroxyphenyl)-3,5,7-trihydroxy- (9CI) (CA INDEX NAME)

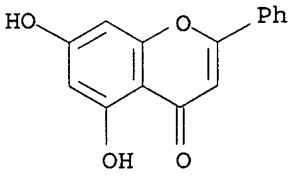


RN 480-18-2 HCAPLUS
CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-2,3-dihydro-3,5,7-trihydroxy-, (2R,3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

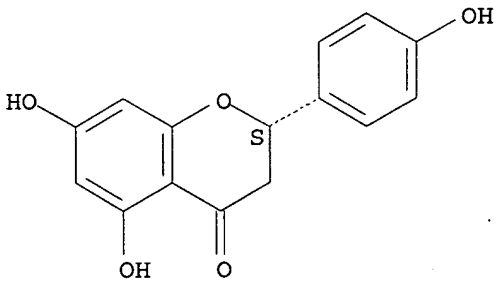


RN 480-40-0 HCAPLUS
CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-2-phenyl- (9CI) (CA INDEX NAME)



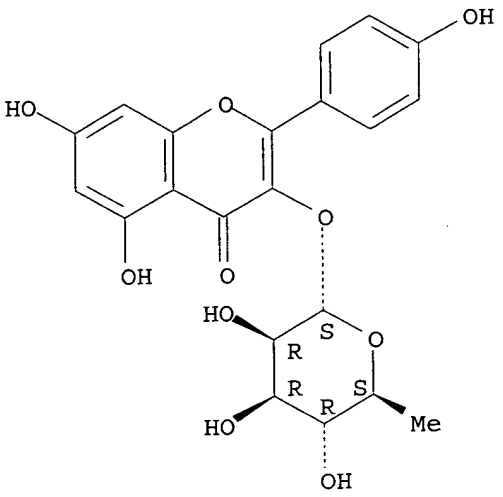
RN 480-41-1 HCAPLUS
CN 4H-1-Benzopyran-4-one, 2,3-dihydro-5,7-dihydroxy-2-(4-hydroxyphenyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



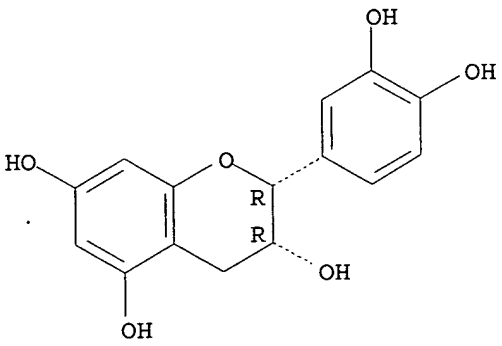
RN 482-39-3 HCAPLUS
CN 4H-1-Benzopyran-4-one, 3-[(6-deoxy-α-L-mannopyranosyl)oxy]-5,7-dihydroxy-2-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

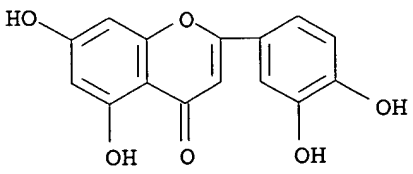


RN 490-46-0 HCAPLUS
CN 2H-1-Benzopyran-3,5,7-triol, 2-(3,4-dihydroxyphenyl)-3,4-dihydro-, (2R,3R)- (9CI) (CA INDEX NAME)

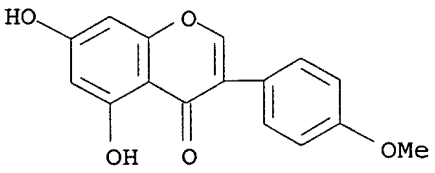
Absolute stereochemistry. Rotation (-).



RN 491-70-3 HCAPLUS
CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-5,7-dihydroxy- (9CI) (CA INDEX NAME)

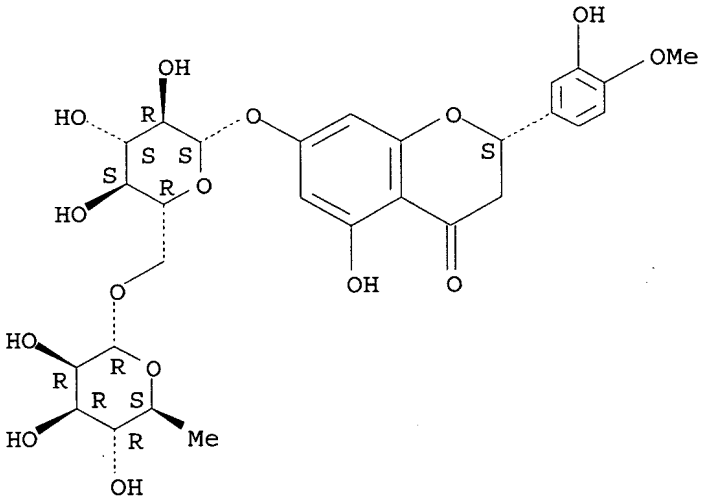


RN 491-80-5 HCAPLUS
CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



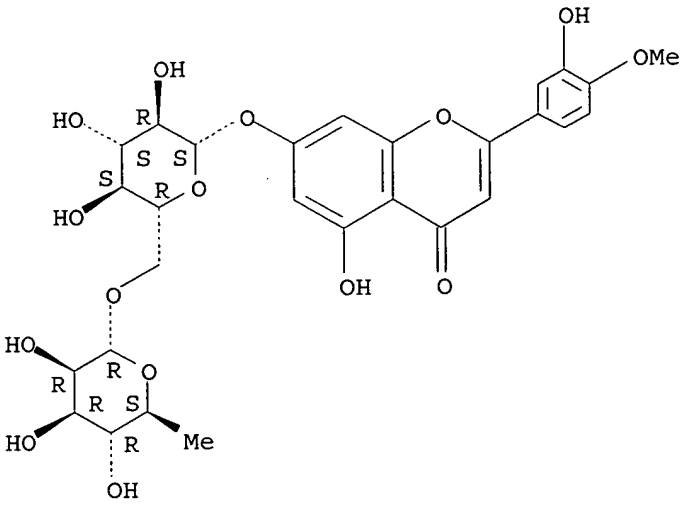
RN 520-26-3 HCAPLUS
CN 4H-1-Benzopyran-4-one, 7-[[6-O-(6-deoxy-α-L-mannopyranosyl)-β-D-glucopyranosyl]oxy]-2,3-dihydro-5-hydroxy-2-(3-hydroxy-4-methoxyphenyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



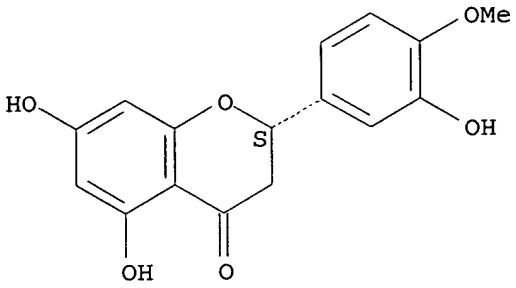
RN 520-27-4 HCAPLUS
CN 4H-1-Benzopyran-4-one, 7-[[6-O-(6-deoxy-α-L-mannopyranosyl)-β-D-glucopyranosyl]oxy]-5-hydroxy-2-(3-hydroxy-4-methoxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

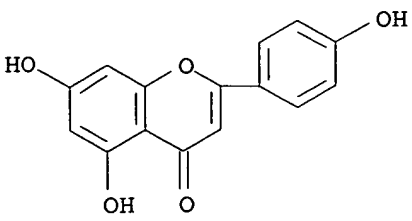


RN 520-33-2 HCAPLUS
CN 4H-1-Benzopyran-4-one, 2,3-dihydro-5,7-dihydroxy-2-(3-hydroxy-4-methoxyphenyl)-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

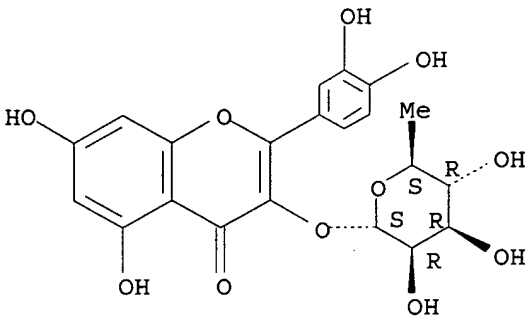


RN 520-36-5 HCAPLUS
CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-2-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

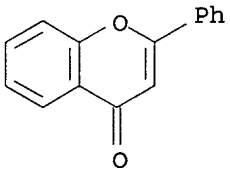


RN 522-12-3 HCAPLUS
CN 4H-1-Benzopyran-4-one, 3-[(6-deoxy-α-L-mannopyranosyl)oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy- (9CI) (CA INDEX NAME)

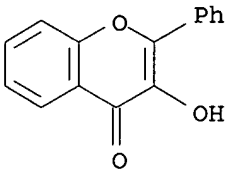
Absolute stereochemistry.



RN 525-82-6 HCAPLUS
CN 4H-1-Benzopyran-4-one, 2-phenyl- (9CI) (CA INDEX NAME)

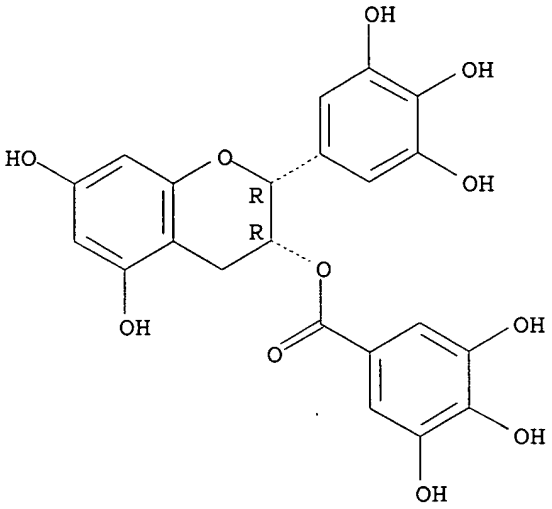


RN 577-85-5 HCAPLUS
CN 4H-1-Benzopyran-4-one, 3-hydroxy-2-phenyl- (9CI) (CA INDEX NAME)



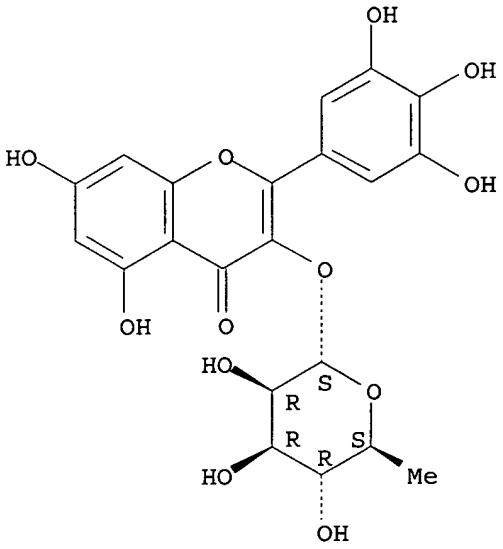
RN 989-51-5 HCAPLUS
CN Benzoic acid, 3,4,5-trihydroxy-, (2R,3R)-3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2H-1-benzopyran-3-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



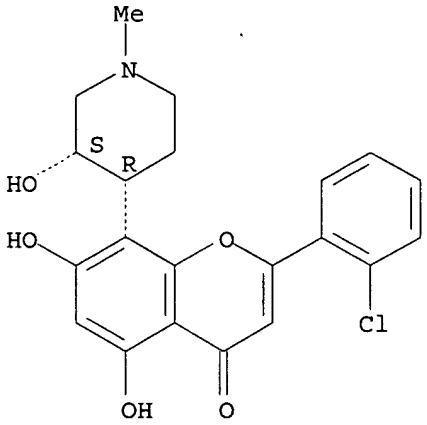
RN 17912-87-7 HCAPLUS
CN 4H-1-Benzopyran-4-one, 3-[(6-deoxy-α-L-mannopyranosyl)oxy]-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



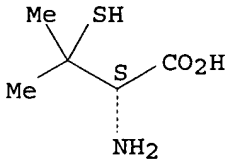
RN 146426-40-6 HCAPLUS
CN 4H-1-Benzopyran-4-one, 2-(2-chlorophenyl)-5,7-dihydroxy-8-[(3S,4R)-3-hydroxy-1-methyl-4-piperidinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

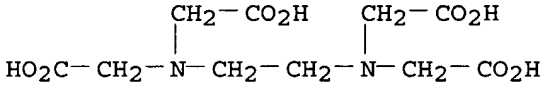


IT *52-67-5*, Penicillamine *60-00-4*, EDTA, biological studies
67-43-6, Diethylenetriamine-N,N,N',N'',N''-pentaacetic acid
70-51-9D, Desferrioxamine, compds. *138-14-7*, Desferal
138-14-7D, Desferrioxamine B mesylate, compds. *13291-61-7*
, trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraacetic acid
14836-73-8, Ferrioxamine *73348-75-1* *115900-75-9*
, CP94
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as *chelating* agent; *chelating* agents for treatment of *ataxia telangiectasia* and diseases associated with oxidative stress and genomic instability)
RN 52-67-5 HCAPLUS
CN D-Valine, 3-mercapto- (9CI) (CA INDEX NAME)

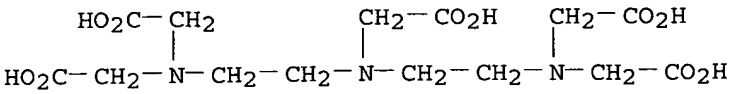
Absolute stereochemistry.



RN 60-00-4 HCAPLUS
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)

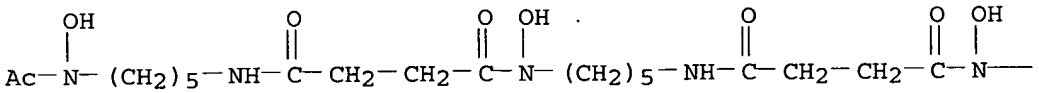


RN 67-43-6 HCAPLUS
CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)

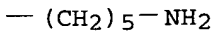


RN 70-51-9 HCAPLUS
CN Butanediamide, N'-[5-[[4-[[5-(acetylhydroxyamino)pentyl]amino]-1,4-dioxobutyl]hydroxyamino]pentyl]-N-(5-aminopentyl)-N-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



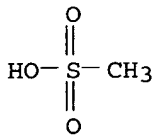
PAGE 1-B



RN 138-14-7 HCAPLUS
CN Butanediamide, N'-[5-[[4-[[5-(acetylhydroxyamino)pentyl]amino]-1,4-dioxobutyl]hydroxyamino]pentyl]-N-(5-aminopentyl)-N-hydroxy-, monomethanesulfonate (salt) (9CI) (CA INDEX NAME)

CM 1

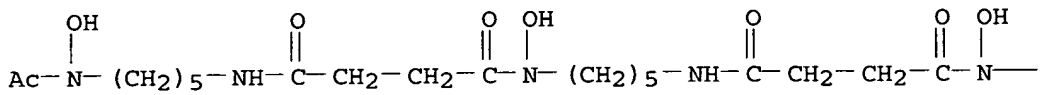
CRN 75-75-2
CMF C H4 O3 S



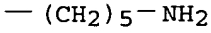
CM 2

CRN 70-51-9
CMF C25 H48 N6 O8

PAGE 1-A



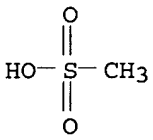
PAGE 1-B



RN 138-14-7 HCAPLUS
CN Butanediamide, N'-[5-[[4-[[5-(acetylhydroxyamino)pentyl]amino]-1,4-dioxobutyl]hydroxyamino]pentyl]-N-(5-aminopentyl)-N-hydroxy-, monomethanesulfonate (salt) (9CI) (CA INDEX NAME)

CM 1

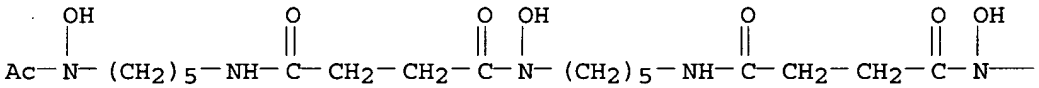
CRN 75-75-2
CMF C H4 O3 S



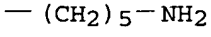
CM 2

CRN 70-51-9
CMF C25 H48 N6 O8

PAGE 1-A

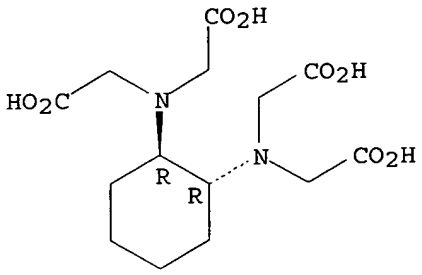


PAGE 1-B

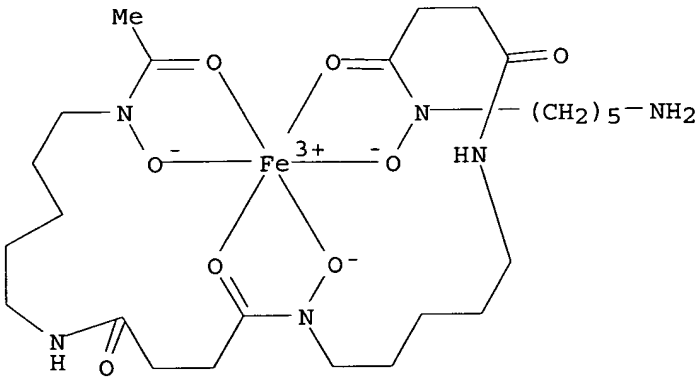


RN 13291-61-7 HCAPLUS
CN Glycine, N,N'-(1R,2R)-1,2-cyclohexanediylbis[N-(carboxymethyl)-, rel- (9CI) (CA INDEX NAME)

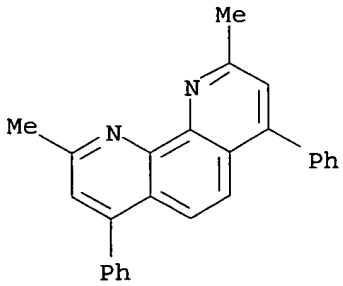
Relative stereochemistry.



RN 14836-73-8 HCAPLUS
CN Iron, [N'-[5-[[4-[[5-[(acetyl-κO)(hydroxy-κO)amino]pentyl]amino]-1-(oxo-κO)-4-oxobutyl](hydroxy-κO)amino]pentyl]-N-(5-aminopentyl)-N-(hydroxy-κO)butanediamidato(3-)-κO1]-, (OC-6-64)- (9CI) (CA INDEX NAME)



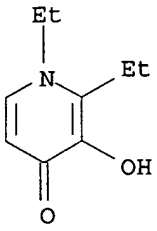
RN 73348-75-1 HCAPLUS
CN 1,10-Phenanthroline, 2,9-dimethyl-4,7-diphenyl-, disulfo deriv. (9CI) (CA INDEX NAME)



2 [D1—SO3H]

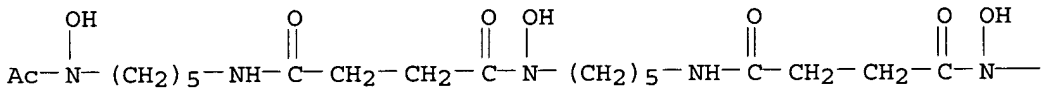
RN 115900-75-9 HCAPLUS

CN 4(1H)-Pyridinone, 1,2-diethyl-3-hydroxy- (9CI) (CA INDEX NAME)

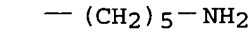


IT ***70-51-9***, Desferrioxamine
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(***chelating*** agents for treatment of ***ataxia telangiectasia*** and diseases associated with oxidative stress and genomic instability)
RN 70-51-9 HCAPLUS
CN Butanediamide, N'-[5-[[4-[[5-(acetylhydroxyamino)pentyl]amino]-1,4-dioxobutyl]hydroxyamino]pentyl]-N-(5-aminopentyl)-N-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L214 ANSWER 2 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2005:107610 HCAPLUS
DOCUMENT NUMBER: 142:422753
TITLE: Pharmacological manipulation of ***ataxia-telangiectasia*** kinase activity as a treatment for Parkinson's disease
AUTHOR(S): ***Shackelford, Rodney Edwin***; Manuszak, Ryan P.; Heard, Steven C.; Link, Charles J.; ***Wang, Suming***
CORPORATE SOURCE: Department of Pathology, Lousiana State University at Shreveport, Shreveport, LA, 711030-3932, USA
SOURCE: Medical Hypotheses (2005), 64(4), 736-741
CODEN: MEHYDY; ISSN: 0306-9877
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Parkinson's disease (PD) is a major cause of morbidity and mortality among older individuals. Although the causes of Parkinson's disease are multifactorial, considerable evidence indicates that elevated

labile iron in the substantia nigra pars compacta plays an important role in producing oxyradicals which subsequently damage nigro-striatal neurons. Based on this several researchers have suggested that blood-brain barrier crossing iron ***chelators*** might have clin. efficacy in treating PD. Work demonstrating that iron ***chelators*** protect nigro-striatal neurons in the N-methyl-4-phenyl-1,2,3,6-tetrahydropyridine and 6-hydroxydopamine-induced rodent PD models supports this hypothesis. Recently, we found that the ATM gene product (mutated in ***ataxia-telangiectasia***, A-T), is required for cell survival and genomic stability maintenance following exposure to low labile iron concns. Iron ***chelators*** (desferal, quercetin, and apoferritin) also increase A-T cell genomic stability and viability, and activate ATM-dependent cellular events in normal cells. Addnl. Atm-deficient mice exhibit a selective loss of dopaminergic nigro-striatal neurons. Based on this, we propose that iron ***chelators*** protect the substantia nigra pars compacta not only by ***chelating*** labile iron and reducing oxyradical formation, but also by inducing ATM activity, leading to increased oxidative stress resistance and DNA repair. Support for this hypothesis comes from the recent observation that the iron ***chelating*** flavonoid quercetin both directly activates ATM and protects neuronal cells from the toxic effects of the N-methyl-4-phenyl-1,2,3,6-tetrahydropyridine. Therefore since; (1) ATM is required for iron toxicity resistance, (2) iron ***chelators*** such as quercetin, desferal, and apoferritin induce ATM activity and/or ATM-dependent events, and (3), Atm-deficient mice preferentially lose dopaminergic nigro-striatal neurons, we propose that ATM activity has an important function in PD. Furthermore, pharmacol. manipulation of ATM activity via iron ***chelation*** might have clin. efficacy in PD treatment.

CC 1-0 (Pharmacology)

ST review ***ataxia telangiectasia*** kinase iron ***chelation*** Parkinson disease antiparkinsonian; desferal quercetin apoferritin Parkinson disease antiparkinsonian review

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ATM (***ataxia telangiectasia*** mutated); pharmacol. manipulation of mutated ***ataxia telangiectasia*** kinase activity via iron ***chelation*** showed efficacy in rodent PD models and may increase SNpc neuronal cell survival and slow clin. progression of Parkinson's disease)

IT Ferritins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(apoferritins; pharmacol. manipulation of mutated ***ataxia telangiectasia*** kinase activity via iron ***chelator*** apoferritin may increase SNpc neuronal cell survival and slow clin. progression of Parkinson's disease)

IT Antiparkinsonian agents
Brain
Chelation
Parkinson's disease
(pharmacol. manipulation of mutated ***ataxia telangiectasia*** kinase activity via iron ***chelation*** showed efficacy in rodent PD models and may increase SNpc neuronal cell survival and slow clin. progression of Parkinson's disease)

IT Brain
(substantia nigra, pars compacta; pharmacol. manipulation of mutated ***ataxia telangiectasia*** kinase activity via iron ***chelation*** may increase neuronal cell survival in substantia nigra pars compacta and show clin. efficacy in Parkinson's disease)

IT 7439-89-6, Iron, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(pharmacol. manipulation of mutated ***ataxia telangiectasia*** kinase activity via iron ***chelation*** showed efficacy in rodent PD models and may increase SNpc neuronal cell survival and slow clin. progression of Parkinson's disease)

IT ***138-14-7***, Desferal
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacol. manipulation of mutated ***ataxia telangiectasia*** kinase activity via iron ***chelator*** desferal may increase SNpc neuronal cell survival and slow clin. progression of Parkinson's disease)

IT ***117-39-5***, Quercetin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacol. manipulation of mutated ***ataxia telangiectasia*** kinase activity via iron ***chelator*** quercetin may increase SNpc neuronal cell survival and slow clin. progression of Parkinson's disease)

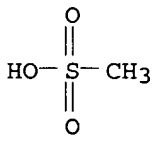
IT ***138-14-7***, Desferal
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacol. manipulation of mutated ***ataxia telangiectasia*** kinase activity via iron ***chelator*** desferal may increase SNpc neuronal cell survival and slow clin. progression of Parkinson's disease)

RN 138-14-7 HCAPLUS

CN Butanediamide, N'-[5-[[4-[[5-(acetylhydroxyamino)pentyl]amino]-1,4-dioxobutyl]hydroxyamino]pentyl]-N-(5-aminopentyl)-N-hydroxy-, monomethanesulfonate (salt) (9CI) (CA INDEX NAME)

CM 1

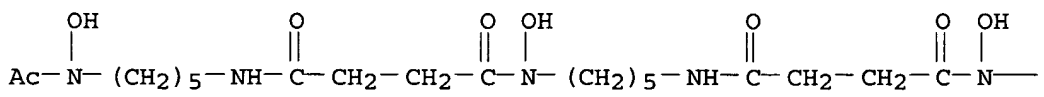
CRN 75-75-2
CMF C H4 O3 S



CM 2

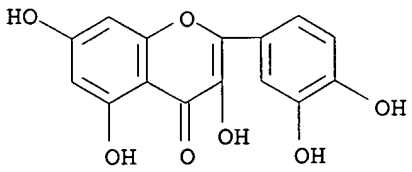
CRN 70-51-9
CMF C25 H48 N6 O8

PAGE 1-A



$-(CH_2)_5-NH_2$

IT ***117-39-5***, Quercetin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmacol. manipulation of mutated ***ataxia telangiectasia*** kinase activity via iron ***chelator*** quercetin may increase SNpc neuronal cell survival and slow clin. progression of Parkinson's disease)
RN 117-39-5 HCAPLUS
CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy- (9CI) (CA INDEX NAME)



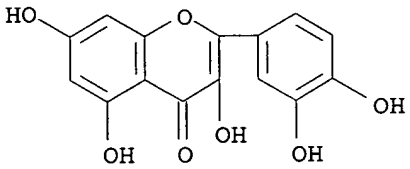
REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L214 ANSWER 3 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2005:465449 HCAPLUS
DOCUMENT NUMBER: 143:277995
TITLE: Pharmacologic manipulation of the ***ataxia-telangiectasia*** mutated gene product as an intervention in age-related disease
AUTHOR(S): ***Shackelford, Rodney E.***
CORPORATE SOURCE: Department of Pathology, Lousiana State University at Shreveport, Shreveport, LA, 711030-3932, USA
SOURCE: Medical Hypotheses (2005), 65(2), 363-369
CODEN: MEHYDY; ISSN: 0306-9877
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. ***Ataxia-telangiectasia*** (A-T) is an autosomal recessive disorder characterized by progressive ataxia, elevated cancer incidence, and premature aging. A-T cells, Atm-deficient mice, and individuals with A-T show increased oxidant sensitivity, genomic instability, altered IGF-1 and p53 signaling, and rapid telomere shortening compared to normal controls. The gene mutated in A-T, ATM, regulates DNA repair, IGF-1 and p53 signaling, age pigment removal, antioxidant capacity, and telomere maintenance - pathways involved in and often attenuated with aging. Interestingly, flavonoids with chemopreventative effects, such as quercetin, genistein, and epigallocatechin gallate activate ATM. Since ATM activates pathways which increase genomic stability, oxidant resistance, and/or telomere stability, and since many diseases of old age (i.e., cancer, cardiovascular and neurodegenerative disease), result from attenuation of these pathways, pharmacol. manipulation of ATM activity via flavonoid intake may prove

useful in slowing the appearance of age-associated disease.
CC 1-0 (Pharmacology)
ST review genetic mutation flavonoid aging ***ataxia telangiectasia***
IT Nervous system, disease
(***ataxia telangiectasia***; pharmacol. manipulation of ATM gene activity via flavonoid may be useful in slowing appearance of age-associated disease in human by activating pathways which increase genomic stability, oxidant resistance and telomere stability)
REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L214 ANSWER 4 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 2004:710500 HCAPLUS
DOCUMENT NUMBER: 141:236524
TITLE: Iron chelators increase the resistance of ***Ataxia telangiectasia*** cells to oxidative stress
AUTHOR(S): ***Shackelford, Rodney E.***; Manuszak, Ryan P.; Johnson, Cybele D.; Hellrung, Daniel J.; Link, Charles J.; ***Wang, Suming***
CORPORATE SOURCE: Iowa Cancer Research Foundation, Urbandale, IA, 50322, USA
SOURCE: DNA Repair (2004), 3(10), 1263-1272
CODEN: DRNEAR; ISSN: 1568-7864
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB ***Ataxia telangiectasia*** (A-T) is an autosomal recessive disorder characterized by immune dysfunction, genomic instability, chronic oxidative damage, and increased cancer incidence. Previously, desferal was found to increase the resistance of A-T, but not normal cells to exogenous oxidative stress in the colony forming-efficiency assay, suggesting that iron metabolism is dysregulated in A-T. Since desferal both chelates iron and modulates gene expression, the authors tested the effects of apoferritin and the iron chelating flavonoid quercetin on A-T cell colony-forming ability. The authors demonstrate that apoferritin and quercetin increase the ability of A-T cells to form colonies. The authors also show that labile iron levels are significantly elevated in Atm-deficient mouse sera compared to syngeneic wild type mice. Our findings support a role for labile iron acting as a Fenton catalyst in A-T, contributing to the chronic oxidative stress seen in this disease. Our findings further suggest that iron chelators might promote the survival of A-T cells and hence, individuals with A-T.
CC 1-12 (Pharmacology)
ST quercetin apoferritin iron chelator oxidative stress ***ataxia telangiectasia***
IT Ferritins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(apoferritins; iron chelators increase resistance of ***Ataxia telangiectasia*** cells to oxidative stress)
IT Nervous system, disease
(***ataxia telangiectasia***; iron chelators increase resistance of ***Ataxia telangiectasia*** cells to oxidative stress)
IT Antioxidants
Chelating agents
Oxidative stress, biological
(iron chelators increase resistance of ***Ataxia telangiectasia*** cells to oxidative stress)

IT Reactive oxygen species
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(iron chelators increase resistance of ***Ataxia telangiectasia*** cells to oxidative stress)
IT 7439-89-6, Iron, biological studies 7782-44-7D, Oxygen, reactive species
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(iron chelators increase resistance of ***Ataxia telangiectasia*** cells to oxidative stress)
IT ***117-39-5***, Quercetin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(iron chelators increase resistance of ***Ataxia telangiectasia*** cells to oxidative stress)
IT ***117-39-5***, Quercetin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(iron chelators increase resistance of ***Ataxia telangiectasia*** cells to oxidative stress)
RN 117-39-5 HCAPLUS
CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L214 ANSWER 5 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6
ACCESSION NUMBER: 2003:985326 HCAPLUS
DOCUMENT NUMBER: 140:175941
TITLE: Functional expression of ATM gene carried by HSV amplicon vector in vitro and in vivo
AUTHOR(S): Qi, J.; ***Shackelford, R.***; Manuszak, R.; Cheng, D.; Smith, M.; Link, C. J.; ***Wang, S.***
CORPORATE SOURCE: Human Gene Therapy Research Institute, Stoddard Cancer Research Institute, IA, USA
SOURCE: Gene Therapy (2004), 11(1), 25-33
CODEN: GETHEC; ISSN: 0969-7128
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB ***Ataxia-telangiectasia*** (AT) is a human autosomal recessive disease with a pleiotropic phenotype characterized by cerebellar degeneration, immunodeficiency, premature aging, cancer predisposition, and radiation sensitivity. The gene mutated in AT, ATM (for AT-mutated), had been cloned and found to have ionizing radiation and oxidative stress-inducible kinase activity. No treatment can stop the progression of the disease. In this study, the complete open-reading frame of ATM cDNA was cloned into a Herpes simplex virus type-1 (HSV-1) amplicon vector (pTO-ATM), and the transduction of cultured AT cells was demonstrated by immunohistochem. and Western blot anal. Functional gene expression was evaluated by cell colony-forming assays following exposure to oxidative stress. The survival of AT cells with ATM gene transduction was about

100% higher compared to nontransduced cells after t-Bu hydroperoxide treatments. Next, the normal ATM gene expression in different regions of the rat brain was studied. Immunohistochem. staining demonstrated weak endogenous ATM protein expression in neurons of the caudate-putamen, with significantly higher levels of expression detected in neurons in other brain regions. Exogenous ATM gene expression from pTO-ATM after viral transduction in the caudate-putamen of the adult rat was examined At 3 days after injection of the pTO-ATM viral vector, abundant pos. ATM staining of the neurons was found at the injection sites, in comparison to the controls. These data demonstrate that the relatively large ATM cDNA can be transduced and expressed in vitro and in vivo from an HSV amplicon viral vector. These data provide initial evidence that the replacement of the ATM gene into the cells of AT patients might be possible some day.

CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 10, 14

IT Proteins
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(ATM (***ataxia telangiectasia*** mutated); functional expression of ATM cDNA carried by HSV amplicon vector in vitro and in rat brain)

IT Nervous system, disease
(***ataxia telangiectasia***; functional expression of ATM cDNA carried by HSV amplicon vector in vitro and in rat brain)

IT cDNA
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(for ATM (***ataxia telangiectasia*** mutated); functional expression of ATM cDNA carried by HSV amplicon vector in vitro and in rat brain)

REFERENCE COUNT: 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L214 ANSWER 6 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 7

ACCESSION NUMBER: 2003:705261 HCAPLUS
DOCUMENT NUMBER: 140:105085
TITLE: Desferrioxamine treatment increases the genomic stability of ***Ataxia-telangiectasia*** cells
AUTHOR(S): ***Shackelford, Rodney E.***; Manuszak, Ryan P.; Johnson, Cybele D.; Hellrung, Daniel J.; Steele, Timothy A.; Link, Charles J.; ***Wang, Suming***
CORPORATE SOURCE: Osteopathic Medical Center, Des Moines University, Des Moines, IA, 50309, USA
SOURCE: DNA Repair (2003), 2(9), 971-981
CODEN: DRNEAR; ISSN: 1568-7864
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB ***Ataxia-telangiectasia*** (AT) is an autosomal recessive disorder characterized by genomic instability, chronic oxidative damage, and increased cancer incidence. Compared to normal cells, AT cells exhibit unusual sensitivity to exogenous oxidants, including t-Bu hydroperoxide (t-BOOH). Since ferritin releases labile iron under oxidative stress (which is chronic in AT) and labile iron mediates the toxic effects of t-Bu hydroperoxide, we hypothesized that ***chelation*** of intracellular labile iron would increase the genomic stability of AT cells, with and without exogenous oxidative stress. Here we report that desferrioxamine treatment increases the plating efficiency of AT, but not normal cells, in the colony forming-efficiency assay (a

method often used to measure genomic stability). Addnl., desferrioxamine increases AT, but not normal cell resistance, to t-Bu hydroperoxide in this assay. Last, AT cells exhibit increased sensitivity to the toxic effects of FeCl2 in the colony forming-efficiency assay and fail to demonstrate a FeCl2-induced G2 checkpoint response when compared to normal cells. Our data indicates that: (1) ***chelation*** of labile iron increases genomic stability in AT cells, but not normal cells; and (2) AT cells exhibit deficits in their responses to iron toxicity. While preliminary, our findings suggest that AT might be, in part, a disorder of iron metabolism and treatment of individuals with AT with desferrioxamine might have clin. efficacy.

CC 1-11 (Pharmacology)
Section cross-reference(s): 14

ST iron ***chelator*** desferrioxamine genomic stability ***Ataxia telangiectasia***

IT Nervous system, disease
(***ataxia telangiectasia***; iron ***chelator*** desferrioxamine increases genomic stability of ***Ataxia telangiectasia*** cells: iron metabolism role in AT pathogenesis)

IT Cell cycle
(checkpoint, G2; iron ***chelator*** desferrioxamine increases genomic stability of ***Ataxia telangiectasia*** cells: iron metabolism role in AT pathogenesis)

IT ***Chelating agents***
Human
Oxidative stress, biological
(iron ***chelator*** desferrioxamine increases genomic stability of ***Ataxia telangiectasia*** cells: iron metabolism role in AT pathogenesis)

IT 75-91-2, tert-Butyl hydroperoxide 7758-94-3, Iron dichloride
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(iron ***chelator*** desferrioxamine increases genomic stability of ***Ataxia telangiectasia*** cells: iron metabolism role in AT pathogenesis)

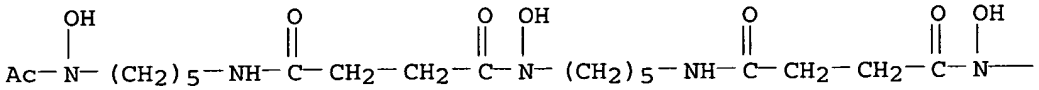
IT 50-78-2, Aspirin ***70-51-9***, Desferrioxamine
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(iron ***chelator*** desferrioxamine increases genomic stability of ***Ataxia telangiectasia*** cells: iron metabolism role in AT pathogenesis)

IT ***70-51-9***, Desferrioxamine
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(iron ***chelator*** desferrioxamine increases genomic stability of ***Ataxia telangiectasia*** cells: iron metabolism role in AT pathogenesis)

RN 70-51-9 HCAPLUS

CN Butanediamide, N'-[5-[[4-[[5-(acetylhydroxyamino)pentyl]amino]-1,4-dioxobutyl]hydroxyamino]pentyl]-N-(5-aminopentyl)-N-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



— $(CH_2)_5$ — NH_2

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L214 ANSWER 7 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 8
ACCESSION NUMBER: 2003:695693 HCAPLUS
DOCUMENT NUMBER: 140:124579
TITLE: ATM-dependent and -independent gene expression changes in response to oxidative stress, gamma irradiation, and UV irradiation
AUTHOR(S): Heinloth, Alexandra N.; ***Shackelford, Rodney E.***; Innes, Cynthia L.; Bennett, Lee; Li, Leping; Amin, Rupesh P.; Sieber, Stella O.; Flores, Kristina G.; Bushel, Pierre R.; Paules, Richard S.
CORPORATE SOURCE: Growth Control and Cancer Group, National Institute of Environmental Health Sciences, Research Triangle Park, NC, 27709, USA
SOURCE: Radiation Research (2003), 160(3), 273-290
CODEN: RAREAE; ISSN: 0033-7587
PUBLISHER: Radiation Research Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB ***Ataxia telangiectasia*** (AT) is an autosomal recessive disorder characterized by progressive cerebellar degeneration, immunodeficiencies, telangiectasias, sensitivity to ionizing radiation, and high predisposition for malignancies. The ***ataxia telangiectasia*** mutated (ATM) gene encodes a protein (ATM) with serine/threonine kinase activity. DNA-double strand breaks are known to increase its kinase activity. While cells from individuals with AT are attenuated in their G1-, S- and G2-phase cell cycle checkpoint functions in response to γ irradiation and oxidative stress, their response to UV irradiation appears to be equivalent to that of wild-type cells. In this study, we investigated changes in gene expression in response to γ irradiation, oxidative stress, and UV irradiation, focusing on the dependence on ATM. Doses for all three treatments were selected that resulted in roughly an equivalent induction of a G1 checkpoint response and inhibition of progression through S phase. To investigate gene expression changes, logarithmically growing wild-type and AT dermal diploid fibroblasts were exposed to either γ radiation (5 Gy), oxidative stress (75 μM t-butyl-hydroperoxide), or UV radiation (7.5 J/m2), and RNA was harvested 6 h after treatment. Gene expression anal. was performed using the NIEHS Human ToxChip 2.0 with approx. 1900 cDNA clones representing known genes and ESTs. All three treatments resulted in distinct patterns of gene expression changes, as shown previously. ATM-dependent and ATM-independent components were detected within these patterns, as were novel indications of involvement of ATM in regulation of transcription factors such as SP1, AP1 and MTF1.

CC 8-7 (Radiation Biochemistry)
IT Nervous system, disease
(***ataxia telangiectasia***; ATM-dependent and -independent gene expression changes in response to oxidative stress, γ-irradiation, and UV)
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L214 ANSWER 8 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 9
ACCESSION NUMBER: 2001:455746 HCAPLUS
DOCUMENT NUMBER: 135:193892
TITLE: The ***Ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint function in human fibroblasts
AUTHOR(S): ***Shackelford, Rodney E.***; Innes, Cynthia L.; Sieber, Stella O.; Heinloth, Alexandra N.; Leadon, Steven A.; Paules, Richard S.
CORPORATE SOURCE: Growth Control and Cancer Group, NIEHS, National Institutes of Health, Research Triangle Park, NC, 27709, USA
SOURCE: Journal of Biological Chemistry (2001), 276(24), 21951-21959
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB ***Ataxia telangiectasia*** (AT) is an autosomal recessive disorder characterized by neuronal degeneration accompanied by ***ataxia***, ***telangiectasias***, acute cancer pre-disposition, and sensitivity to ionizing radiation (IR). Cells from individuals with AT show unusual sensitivity to IR, severely attenuated cell cycle checkpoint functions, and poor p53 induction in response to IR compared with normal human fibroblasts (NHFs). The gene mutated in AT (ATM) has been cloned, and its product, pATM, has IR-inducible kinase activity. The AT phenotype has been suggested to be a consequence, at least in part, of an inability to respond appropriately to oxidative damage. To test this hypothesis, we examined the ability of NHFs and AT dermal fibroblasts to respond to t-Bu hydroperoxide and IR treatment. AT fibroblasts exhibit, in comparison to NHFs, increased sensitivity to the toxicity of t-Bu hydroperoxide, as measured by colony-forming efficiency assays. Unlike NHFs, AT fibroblasts fail to show G1 and G2 phase checkpoint functions or to induce p53 in response to t-Bu hydroperoxide. Treatment of NHFs with t-Bu hydroperoxide activates pATM-associated kinase activity. Our results indicate that pATM is involved in responding to certain aspects of oxidative damage and in signaling this information to downstream effectors of the cell cycle checkpoint functions. Our data further suggest that some of the pathologies seen in AT could arise as a consequence of an inability to respond normally to oxidative damage.

CC 14-10 (Mammalian Pathological Biochemistry)
ST ***Ataxia telangiectasia*** gene oxidative stress cell cycle fibroblast
IT Gene, animal
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(AT; ***Ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint function in human fibroblasts)
IT Fibroblast
Oxidative stress, biological
Phenotypes
Signal transduction, biological
(***Ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint function in human fibroblasts)
IT p53 (protein)

RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(***Ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint function in human fibroblasts)

IT Interphase (cell cycle)
(G1-phase; ***Ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint function in human fibroblasts)

IT Interphase (cell cycle)
(G2-phase; ***Ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint function in human fibroblasts)

IT Neoplasm
(acute cancer pre-disposition; ***Ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint function in human fibroblasts)

IT Nervous system
(***ataxia telangiectasia***; ***Ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint function in human fibroblasts)

IT Nerve
(degeneration; ***Ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint function in human fibroblasts)

IT Ionizing radiation
(sensitivity to; ***Ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint function in human fibroblasts)

IT 182970-53-2, gene ATM protein
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(***Ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint function in human fibroblasts)

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L214 ANSWER 9 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 10

ACCESSION NUMBER: 2001:512887 HCAPLUS
DOCUMENT NUMBER: 135:267656
TITLE: Caspase-2 deficiency prevents programmed germ cell death resulting from cytokine insufficiency but not meiotic defects caused by loss of ***ataxia telangiectasia***-mutated (Atm) gene function
AUTHOR(S): Morita, Y.; Maravei, D. V.; Bergeron, L.; ***Wang, S.***; Perez, G. I.; Tsutsumi, O.; Taketani, Y.; Asano, M.; Horai, R.; Korsmeyer, S. J.; Iwakura, Y.; Yuan, J.; Tilly, J. L.
CORPORATE SOURCE: Vincent Center for Reproductive Biology, Department of Obstetrics and Gynecology, Massachusetts General Hospital/Harvard Medical School, Boston, MA, 02114, USA
SOURCE: Cell Death and Differentiation (2001), 8(6), 614-620
CODEN: CDDIEK; ISSN: 1350-9047
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English

AB It is well established that programmed cell death claims up to two-thirds

of the oocytes produced during gametogenesis in the developing fetal ovaries. However, the mechanisms underlying prenatal germ cell loss in females remain poorly understood. Herein the authors report that caspase-11 null female mice are born with a reduced number of oocyte-containing primordial follicles. This phenotype is likely due to failed cytokine processing known to occur in caspase-11 mutants since neonatal female mice lacking both interleukin (IL)-1α and IL-1β also exhibit a reduced endowment of primordial follicles. In addition, germ cell death in wild-type fetal ovaries cultured ex vivo is suppressed by either cytokine, likely via ligand activation of type 1 IL-1 receptors expressed in fetal germ cells. Normal oocyte endowment can be restored in caspase-11 null female mice by simultaneous inactivation of the gene encoding the cell death executioner enzyme, caspase-2. However, caspase-2 deficiency cannot overcome gametogenic failure resulting from meiotic recombination defects in ***ataxia telangiectasia***-mutated (Atm) null female mice. Thus, genetically distinct mechanisms exist for developmental deletion of oocytes via programmed cell death, one of which probably functions as a meiotic quality-control checkpoint that cannot be overridden.

CC 2-10 (Mammalian Hormones)
Section cross-reference(s): 13

ST IL1 caspase ovary germ cell apoptosis ***ataxia telangiectasia***

IT Gene, animal
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(Bax; caspase-2 deficiency prevents programmed germ cell death resulting from cytokine insufficiency but not meiotic defects caused by loss of ***ataxia telangiectasia***-mutated gene function)

IT Nervous system
(***ataxia telangiectasia***; caspase-2 deficiency prevents programmed germ cell death resulting from cytokine insufficiency but not meiotic defects caused by loss of ***ataxia telangiectasia***-mutated gene function)

IT Apoptosis
Gamete and Germ cell
Meiosis
(caspase-2 deficiency prevents programmed germ cell death resulting from cytokine insufficiency but not meiotic defects caused by loss of ***ataxia telangiectasia***-mutated gene function)

IT Interleukin 1α
Interleukin 1β
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(caspase-2 deficiency prevents programmed germ cell death resulting from cytokine insufficiency but not meiotic defects caused by loss of ***ataxia telangiectasia***-mutated gene function)

IT Ovary
(follicle; caspase-2 deficiency prevents programmed germ cell death resulting from cytokine insufficiency but not meiotic defects caused by loss of ***ataxia telangiectasia***-mutated gene function)

IT Egg
(oocyte; caspase-2 deficiency prevents programmed germ cell death resulting from cytokine insufficiency but not meiotic defects caused by loss of ***ataxia telangiectasia***-mutated gene function)

IT Interleukin 1 receptors

RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(type I; caspase-2 deficiency prevents programmed germ cell death resulting from cytokine insufficiency but not meiotic defects caused by loss of ***ataxia telangiectasia***-mutated gene function)

IT 182372-14-1, caspase 2 216503-96-7, caspase 11
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(caspase-2 deficiency prevents programmed germ cell death resulting from cytokine insufficiency but not meiotic defects caused by loss of ***ataxia telangiectasia***-mutated gene function)

REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L214 ANSWER 10 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 11
ACCESSION NUMBER: 1999:725087 HCAPLUS
DOCUMENT NUMBER: 132:62619
TITLE: Lack of involvement of ***ataxia telangiectasia*** mutated (ATM) in regulation of nuclear factor-κB (NF-κB) in human diploid fibroblasts
AUTHOR(S): Ashburner, Brian P.; ***Shackelford, Rodney E.***; Baldwin, Albert S., Jr.; Paules, Richard S.
CORPORATE SOURCE: Lineberger Comprehensive Cancer Center, University of North Carolina School of Medicine, Chapel Hill, NC, 27599, USA
SOURCE: Cancer Research (1999), 59(21), 5456-5460
CODEN: CNREA8; ISSN: 0008-5472
PUBLISHER: AACR Subscription Office
DOCUMENT TYPE: Journal
LANGUAGE: English

AB It has been suggested that the cellular response to exposure to ionizing radiation involves activation of the transcription factor nuclear factor-κB (NF-κB) and that this response is defective in cells from individuals with ***ataxia telangiectasia*** (AT). In one study, it was found that SV40 large T-transformed cells derived from a patient null for the AT mutated (ATM) gene exhibited constitutive activation of NF-κB and that in those cells, inhibition of NF-κB by expression of a modified form of IκBα led to correction of the radiosensitivity associated with the AT phenotype. From those data, it was suggested that NF-κB played a role in the AT phenotype. We show here that normal diploid cells derived from AT patients do not exhibit constitutive activation of NF-κB. Furthermore, we provide data that the transformation process associated with SV40 large T antigen expression in AT-/- cells leads to aberrant cellular responses. Our studies highlight the importance of using diploid, nontransformed AT-/- cells for in vitro studies relevant to the AT phenotype whenever possible.

CC 14-14 (Mammalian Pathological Biochemistry)
Section cross-reference(s): 3, 8

ST ***ataxia telangiectasia*** gene ATM NFkappaB fibroblast

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(ATM; lack of involvement of ***ataxia telangiectasia*** mutated (ATM) in regulation of NF-κB in human diploid fibroblasts in relation to radiosensitivity)

IT Phosphoproteins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); BIOL (Biological study)
(IκB-α (inhibitor of RNA formation factor NF-κB, α); lack of involvement of ***ataxia telangiectasia*** mutated (ATM) in regulation of NF-κB in human diploid fibroblasts in relation to radiosensitivity)

IT Transcription factors
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(NF-κB (nuclear factor κB); lack of involvement of ***ataxia telangiectasia*** mutated (ATM) in regulation of NF-κB in human diploid fibroblasts in relation to radiosensitivity)

IT Nervous system
(***ataxia telangiectasia***; lack of involvement of ***ataxia telangiectasia*** mutated (ATM) in regulation of NF-κB in human diploid fibroblasts in relation to radiosensitivity)

IT Transformation, neoplastic
(fibroblast; lack of involvement of ***ataxia telangiectasia*** mutated (ATM) in regulation of NF-κB in human diploid fibroblasts in relation to radiosensitivity)

IT Fibroblast
Ionizing radiation
(lack of involvement of ***ataxia telangiectasia*** mutated (ATM) in regulation of NF-κB in human diploid fibroblasts in relation to radiosensitivity)

IT Fibroblast
(transformation; lack of involvement of ***ataxia telangiectasia*** mutated (ATM) in regulation of NF-κB in human diploid fibroblasts in relation to radiosensitivity)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L214 ANSWER 11 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 12
ACCESSION NUMBER: 1999:221513 HCAPLUS
DOCUMENT NUMBER: 131:54809
TITLE: Cell cycle control, checkpoint mechanisms, and genotoxic stress
AUTHOR(S): ***Shackelford, Rodney E.***; Kaufmann, William K.; Paules, Richard S.
CORPORATE SOURCE: Growth Control and Cancer Group, National Institute of Environmental Health Sciences, Research Triangle Park, NC, 27709, USA
SOURCE: Environmental Health Perspectives Supplements (1999), 107(1), 5-24
CODEN: EHPSEO; ISSN: 1078-0475
PUBLISHER: National Institute of Environmental Health Sciences
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with 490 refs. The ability of cells to maintain genomic integrity is vital for cell survival and proliferation. Lack of fidelity in DNA replication and maintenance can result in deleterious mutations leading to cell death or, in multicellular organisms, cancer. The purpose of this review is to discuss the known signal transduction pathways that regulate cell cycle progression and the mechanisms cells employ to insure DNA stability in the face of genotoxic stress. In particular, we focus on mammalian cell cycle checkpoint functions, their role in maintaining DNA stability during the cell cycle following exposure to genotoxic agents, and the gene products that act in checkpoint function signal transduction

cascades. Key transitions in the cell cycle are regulated by the activities of various protein kinase complexes composed of cyclin and cyclin-dependent kinase (Cdk) mols. Surveillance control mechanisms that check to ensure proper completion of early events and cellular integrity before initiation of subsequent events in cell cycle progression are referred to as cell cycle checkpoints and can generate a transient delay that provides the cell more time to repair damage before progressing to the next phase of the cycle. A variety of cellular responses are elicited that function in checkpoint signaling to inhibit cyclin/Cdk activities. These responses include the p53-dependent and p53-independent induction of Cdk inhibitors and the p53-independent inhibitory phosphorylation of Cdk mols. themselves. Eliciting proper G1, S, and G2 checkpoint responses to double-strand DNA breaks requires the function of the ***Ataxia telangiectasia*** mutated gene product. Several human heritable cancer-prone syndromes known to alter DNA stability have been found to have defects in checkpoint surveillance pathways. Exposures to several common sources of genotoxic stress, including oxidative stress, ionizing radiation, UV radiation, and the genotoxic compound benzo[a]pyrene, elicit cell cycle checkpoint responses that show both similarities and differences in their mol. signaling.

CC 4-0 (Toxicology)
Section cross-reference(s): 8, 14

REFERENCE COUNT: 490 THERE ARE 490 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L214 ANSWER 12 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:38566 HCAPLUS
DOCUMENT NUMBER: 144:485602
TITLE: Increased transferrin receptor expression following 11q23 deletion as a mechanism of malignant progression in chronic lymphocytic leukemia
AUTHOR(S): ***Shackelford, Rodney E.***; Bhalodia, Ami R.; Cotelingam, James D.; Veillon, Diana M.; Lowery-Nordberg, Mary
CORPORATE SOURCE: Department of Pathology, Louisiana State University at Shreveport, Shreveport, LA, 711030-3932, USA
SOURCE: Medical Hypotheses (2005), Volume Date 2006, 66(3), 509-512
CODEN: MEHYDY; ISSN: 0306-9877
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. Chronic lymphocytic leukemia (CLL) is a common adult leukemia characterized by the accumulation of mature neoplastic B-lymphocytes. Typically, CLL follows an indolent course, with most patients surviving for many years. However, 10-20% of CLL patients carry 11q23 chromosomal deletions and often exhibit a more severe disease course, with earlier onset of symptoms, shortened lymphocyte doubling time, poor response to therapy, and shortened survival. The mol. basis for 11q23 deletions resulting in a poor prognosis is currently poorly understood. The tumor suppressor gene, ***ataxia-telangiectasia*** mutated (ATM, 11q22.3-23.1), is considered a likely candidate gene whose loss could result in the poor prognosis associated with 11q23 deletion and is mutated in a significant percentage of CLL cases. Recently, recombinant ATM expression in ATM-deficient cells was found to decrease transferrin receptor (TfR) expression, suggesting that deletion of the chromosomal region carrying ATM results in increased TfR expression. TfR imports iron into cells, an event necessary for DNA synthesis and cell growth. Addnl., rapidly growing malignant cells, including lymphomas and CLL, often

express high TfR levels. Based on this, we propose that one mol. mechanism by which 11q23 deletions confer a poor prognosis in CLL is via increased TfR expression secondary to ATM loss, resulting in the increased cellular iron import, and hence increased capacity for malignant growth. Our hypothesis may also partially explain why gallium, an atomically iron-like toxic metal that binds to transferrin and the TfR is incorporated into cells and was previously demonstrated to have anti-tumor activity in patients with lymphomas refractory to other chemotherapeutic treatments.

CC 14-0 (Mammalian Pathological Biochemistry)
Section cross-reference(s): 3

IT Proteins
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(ATM (***ataxia telangiectasia*** mutated); chromosomal 11q23 deletion may confer poor prognosis in CLL patient via increased TfR expression secondary to tumor suppressor gene ATM loss resulting in cellular iron import hence increased capacity for malignant growth)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, MEDLINE, BIOSIS' - CONTINUE? (Y)/N:y

L214 ANSWER 13 OF 22 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2006016513 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16326028
TITLE: Increased transferrin receptor expression following 11q23 deletion as a mechanism of malignant progression in chronic lymphocytic leukemia.
AUTHOR: ***Shackelford Rodney E***; Bhalodia Ami R; Cotelingam James D; Veillon Diana M; Lowery-Nordberg Mary
CORPORATE SOURCE: Louisiana State University at Shreveport, Department of Pathology, 1501 Kings Hwy, P.O. Box 33932, Shreveport, LA 711030-3932, USA.. RdnyShac@aol.com
SOURCE: Medical hypotheses, (2006) Vol. 66, No. 3, pp. 509-12. Electronic Publication: 2005-12-02. Journal code: 7505668. ISSN: 0306-9877.
PUB. COUNTRY: Scotland: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200606
ENTRY DATE: Entered STN: 11 Jan 2006
Last Updated on STN: 23 Jun 2006
Entered Medline: 22 Jun 2006

ABSTRACT:
Chronic lymphocytic leukemia (CLL) is a common adult leukemia characterized by the accumulation of mature neoplastic B-lymphocytes. Typically, CLL follows an indolent course, with most patients surviving for many years. However, 10-20% of CLL patients carry 11q23 chromosomal deletions and often exhibit a more severe disease course, with earlier onset of symptoms, shortened lymphocyte doubling time, poor response to therapy, and shortened survival. The molecular basis for 11q23 deletions resulting in a poor prognosis is currently poorly understood. The tumor suppressor gene, ***ataxia-telangiectasia*** mutated (ATM, 11q22.3-23.1), is considered a likely candidate gene whose loss could result in the poor prognosis associated with 11q23 deletion and is

mutated in a significant percentage of CLL cases. Recently, recombinant ATM expression in ATM-deficient cells was found to decrease transferrin receptor (TfR) expression, suggesting that deletion of the chromosomal region carrying ATM results in increased TfR expression. TfR imports iron into cells, an event necessary for DNA synthesis and cell growth. Additionally, rapidly growing malignant cells, including lymphomas and CLL, often express high TfR levels. Based on this, we propose that one molecular mechanism by which 11q23 deletions confer a poor prognosis in CLL is via increased TfR expression secondary to ATM loss, resulting in the increased cellular iron import, and hence increased capacity for malignant growth. Our hypothesis may also partially explain why gallium, an atomically iron-like toxic metal that binds to transferrin and the TfR is incorporated into cells and was previously demonstrated to have anti-tumor activity in patients with lymphomas refractory to other chemotherapeutic treatments.

CONTROLLED TERM: B-Lymphocytes: PA, pathology
Cell Cycle Proteins: GE, genetics
Chromosome Deletion
*Chromosomes, Human, Pair 11
DNA-Binding Proteins: GE, genetics
Disease Progression
*Gene Deletion
Humans
*Leukemia, Lymphocytic, Chronic: GE, genetics
Lymphocytes: ME, metabolism
Prognosis
Protein-Serine-Threonine Kinases: GE, genetics
*Receptors, Transferrin: BI, biosynthesis
Receptors, Transferrin: GE, genetics
Recombinant Proteins: ME, metabolism
Tumor Suppressor Proteins: GE, genetics

CHEMICAL NAME: 0 (Cell Cycle Proteins); 0 (DNA-Binding Proteins); 0 (Receptors, Transferrin); 0 (Recombinant Proteins); 0 (Tumor Suppressor Proteins); EC 2.7.1.37 (Protein-Serine-Threonine Kinases); EC 2.7.1.37 (***ataxia telangiectasia*** mutated protein)

L214 ANSWER 14 OF 22 MEDLINE on STN
ACCESSION NUMBER: 2000144083 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10677503
TITLE: The catalytic subunit of DNA-dependent protein kinase selectively regulates p53-dependent apoptosis but not cell-cycle arrest.
AUTHOR: ***Wang S***; Guo M; Ouyang H; Li X; Cordon-Cardo C; Kurimasa A; Chen D J; Fuks Z; Ling C C; Li G C
CORPORATE SOURCE: Department of Medical Physics, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021; and Los Alamos National Laboratory, Los Alamos, NM 87545, USA.
CONTRACT NUMBER: CA-31397 (NCI)
CA-56909 (NCI)
CA-78497 (NCI)
+
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (2000 Feb 15) Vol. 97, No. 4, pp. 1584-8.
Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200003

ENTRY DATE: Entered STN: 30 Mar 2000
Last Updated on STN: 20 Apr 2002
Entered Medline: 23 Mar 2000

ABSTRACT:
DNA damage induced by ionizing radiation (IR) activates p53, leading to the regulation of downstream pathways that control cell-cycle progression and apoptosis. However, the mechanisms for the IR-induced p53 activation and the differential activation of pathways downstream of p53 are unclear. Here we provide evidence that the catalytic subunit of DNA-dependent protein kinase (DNA-PKcs) serves as an upstream effector for p53 activation in response to IR, linking DNA damage to apoptosis. DNA-PKcs knockout (DNA-PKcs-/-) mice were exposed to whole-body IR, and the cell-cycle and apoptotic responses were examined in their thymuses. Our data show that IR induction of apoptosis and Bax expression, both mediated via p53, was significantly suppressed in the thymocytes of DNA-PKcs-/- mice. In contrast, IR-induced cell-cycle arrest and p21 expression were normal. Thus, DNA-PKcs deficiency selectively disrupts p53-dependent apoptosis but not cell-cycle arrest. We also confirmed previous findings that p21 induction was attenuated and cell-cycle arrest was defective in the thymoctyes of whole body-irradiated Atm-/- mice, but the apoptotic response was unperturbed. Taken together, our results support a model in which the upstream effectors DNA-PKcs and Atm selectively activate p53 to differentially regulate cell-cycle and apoptotic responses. Whereas Atm selects for cell-cycle arrest but not apoptosis, DNA-PKcs selects for apoptosis but not cell-cycle arrest.

CONTROLLED TERM:
Animals
*Apoptosis: GE, genetics
Apoptosis: RE, radiation effects
Ataxia Telangiectasia: GE, genetics
*Cell Cycle: GE, genetics
Cell Cycle: RE, radiation effects
DNA Repair: RE, radiation effects
DNA-Activated Protein Kinase
*DNA-Binding Proteins
Flow Cytometry
In Situ Nick-End Labeling
Mice
Mice, Knockout
*Protein-Serine-Threonine Kinases: GE, genetics
Protein-Serine-Threonine Kinases: ME, metabolism
Proto-Oncogene Proteins: ME, metabolism
*Proto-Oncogene Proteins c-bcl-2
Research Support, U.S. Gov't, Non-P.H.S.
Research Support, U.S. Gov't, P.H.S.
Thymus Gland: PA, pathology
Thymus Gland: RE, radiation effects
*Tumor Suppressor Protein p53: ME, metabolism
Whole-Body Irradiation
bcl-2-Associated X Protein

CHEMICAL NAME: 0 (Bax protein, mouse); 0 (DNA-Binding Proteins); 0 (Proto-Oncogene Proteins); 0 (Proto-Oncogene Proteins c-bcl-2); 0 (Tumor Suppressor Protein p53); 0 (bcl-2-Associated X Protein); EC 2.7.1.37 (DNA-Activated Protein Kinase); EC 2.7.1.37 (Protein-Serine-Threonine Kinases)

L214 ANSWER 15 OF 22 MEDLINE on STN
ACCESSION NUMBER: 1998347138 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9682216
TITLE: A model for ATM heterozygote identification in a large population: four founder-effect ATM mutations identify most

of Costa Rican patients with ***ataxia telangiectasia.***
AUTHOR: Telatar M; ***Wang S***; Castellvi-Bel S; Tai L Q; Sheikhavandi S; Regueiro J R; Porras O; Gatti R A
CORPORATE SOURCE: Department of Pathology, University of California at Los Angeles School of Medicine 90095, USA.
SOURCE: Molecular genetics and metabolism, (1998 May) Vol. 64, No. 1, pp. 36-43.
Journal code: 9805456. ISSN: 1096-7192.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199810
ENTRY DATE: Entered STN: 20 Oct 1998
Last Updated on STN: 20 Oct 1998
Entered Medline: 6 Oct 1998

ABSTRACT:
Ataxia telangiectasia (A-T) is an autosomal recessive disorder with a broad range of clinical manifestations and a frequency of 1:40,000-100,000 live births. Epidemiological studies have suggested that A-T heterozygotes are at an elevated risk of breast cancer. ATM mutations occur worldwide over the entire ATM gene, making it difficult to identify heterozygotes in large populations. However, some founder-effect mutations are specific for certain populations. Here, we present four mutations in Costa Rican A-T patients that accounted for 86-93% of 41 patients studied in two batches. We have developed assays for rapid detection of these four mutations which can be used diagnostically. They will also enable the Costa Rican population to be used as a model for analyzing the role of ATM heterozygosity in cancer development and other disorders.

CONTROLLED TERM: ***Ataxia Telangiectasia: DI, diagnosis***
****Ataxia Telangiectasia: GE, genetics***
Codon, Terminator
Costa Rica
Exons: GE, genetics
*Founder Effect
Genes, Recessive
*Genetic Screening: MT, methods
*Haplotypes
*Heterozygote Detection
Humans
Point Mutation
Restriction Mapping
Sequence Deletion
CHEMICAL NAME: 0 (Codon, Terminator)

L214 ANSWER 16 OF 22 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:170137 BIOSIS
DOCUMENT NUMBER: PREV200600171437
TITLE: ***Ataxia-telangiectasia*** mutated gene product activity increases resistance to Aspergillus fumigatus gliotoxin toxicity.
AUTHOR(S): ***Shackelford, R. E.*** [Reprint Author]; Fu, Y.; Abdelbaqi, M.; Lowery-Nordberg, M.; Chen, A.
CORPORATE SOURCE: Louisiana State Univ, Shreveport, LA 71105 USA
SOURCE: Modern Pathology, (JAN 2006) Vol. 19, No. Suppl. 1, pp. 257A-258A.
Meeting Info.: 95th Annual Meeting of the United-States-and-Canadian-Academy-of-Pathology. Atlanta,

GA, USA. February 11 -17, 2006. US & Canadian Acad Pathol.
ISSN: 0893-3952.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Mar 2006
Last Updated on STN: 9 Mar 2006
CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Genetics - Plant 03504
Biochemistry studies - General 10060
Toxicology - General and methods 22501
Plant physiology - Chemical constituents 51522
INDEX TERMS: Major Concepts
Toxicology; Biochemistry and Molecular Biophysics
INDEX TERMS: Chemicals & Biochemicals
ATM; gliotoxin
ORGANISM: Classifier
Fungi Imperfecti or Deuteromycetes 15500
Super Taxa
Fungi; Plantae
Organism Name
Aspergillus fumigatus (species)
Taxa Notes
Fungi, Microorganisms, Nonvascular Plants, Plants
REGISTRY NUMBER: 67-99-2 (gliotoxin)
GENE NAME: Aspergillus fumigatus ATM gene [Aspergillus fumigatus ***ataxia telangiectasia*** mutated gene]
(Fungi Imperfecti or Deuteromycetes)

L214 ANSWER 17 OF 22 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:414873 BIOSIS
DOCUMENT NUMBER: PREV200510210084
TITLE: The ***ataxia-telangiectasia*** gene product is required for genomic stability following labile ferric iron exposure.
AUTHOR(S): ***Shackelford, R. E.*** [Reprint Author]; Manuszak, R. P.; ***Wang, S.***; Lowery-Norberg, M.; Chen, A.
CORPORATE SOURCE: Louisiana State Univ, Shreveport, LA 71105 USA
SOURCE: Modern Pathology, (JAN 2005) Vol. 18, No. Suppl. 1, pp. 301A.
Meeting Info.: 94th Annual Meeting of the United-States-and-Canadian-Academy-of-Pathology. San Antonio, TX, USA. February 26 -March 04, 2005. US Canadian Acad Pathol.
ISSN: 0893-3952.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Oct 2005
Last Updated on STN: 19 Oct 2005
CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Genetics - General 03502
Genetics - Human 03508
Biochemistry studies - General 10060
Cardiovascular system - Blood vessel pathology 14508
Nervous system - Pathology 20506
Immunology - Immunopathology, tissue immunology 34508

INDEX TERMS: Major Concepts
Molecular Genetics (Biochemistry and Molecular Biophysics)
INDEX TERMS: Diseases
ataxia-telangiectasia: vascular disease, genetic disease, immune system disease, nervous system disease
Ataxia Telangiectasia (MeSH)
INDEX TERMS: Chemicals & Biochemicals
ferric iron; ***desferal***: ***chelating*** agent; apoferriton: ***chelating*** agent; ***quercetin***: ***chelating*** agent; ***epigallocatechin-3 gallate***: ***chelating*** agent
INDEX TERMS: Miscellaneous Descriptors
cell viability; genomic stability; ferric iron exposure
REGISTRY NUMBER: 20074-52-6 (ferric iron)
138-14-7 (***desferal***)
117-39-5 (***quercetin***)
989-51-5 (***epigallocatechin-3 gallate***)
GENE NAME: human ATM gene gene (Hominidae)

L214 ANSWER 18 OF 22 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:523626 BIOSIS
DOCUMENT NUMBER: PREV200510313589
TITLE: A MAP4K4-TRF2 cycle amplifies apoptotic signals in mouse myocardium.
AUTHOR(S): Xie, Min [Reprint Author]; ***Wang, Sam C.***; Zhang, Dou; Prahash, Arun J.; Oh, Hidemasa; Sano, Motoaki; Wang, Xiaozhen; Pocius, Jennifer S.; Taffet, George E.; Michael, Lloyd H.; Tan, Tse-Hua; Entman, Mark L.; Schneider, Michael D.
CORPORATE SOURCE: Baylor Coll Med, Houston, TX 77030 USA
SOURCE: Circulation, (OCT 26 2004) Vol. 110, No. 17, Suppl. S, pp. 1.
Meeting Info.: 77th Scientific Meeting of the American-Heart-Association. New Orleans, LA, USA. November 07 -10, 2004. Amer Heart Assoc.
CODEN: CIRCAZ. ISSN: 0009-7322.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 1 Dec 2005
Last Updated on STN: 1 Dec 2005
ABSTRACT:Background: Loss of TRF2 (Telomeric Repeat-binding Factor-2) causes apoptosis in cardiomyocytes and other cell types, but how it actuates apoptosis is unknown. Here, we studied the HPK/GCK-like Kinase (HGK, MAP4K4) and its potential relation to telomere dysfunction in cardiomyocytes. Results: (1) In mouse myocardium, each of four biological signals for cardiomyocyte apoptosis induced the kinase activity of HGK: biomechanical stress, ischemia/ reperfusion injury, and gain-of-function mutations for TNF alpha or Gq. (2) Analogous results were seen in cultured cardiomyocytes, using oxidative stress, ceramide, doxorubicin, and Gq. (3) HGK-induced apoptosis occurred via TAK1 (MAP3K7), JNK, and dissipation of mitochondrial membrane potential. (4) Interrupting normal TRF2 function in cardiomyocytes with dnTRF2 elicited phosphorylation of p53 and histone H2AX, targets for the ***ataxia-telangiectasia*** mutated (ATM) DNA damage signaling pathway. (5) Evidence placing TRF2 upstream of the apoptotic HGK-TAK1-JNK signaling module includes: dnTRF2 or knockdown of TRF2

by antisense oligos activated HGK in cardiomyocytes and/or mice; TRF2 reduced basal HGK activity, and apoptosis due to dnTRF2 was largely blocked by dnTAK1 or dnJNK1. (6) Activation of the HGK-TAK1-JNK pathway, in turn, markedly reduced TRF2 levels. (7) Conversely, dominant-negative mutations of the kinases protected TRF2 loss induced by ceramide, a potent activator of HGK. (8) To test the predicted function of TRF2 in vivo, we created alpha MHC driven gain-of-function and dominant-inhibitory (cm mutations. As anticipated, the dnTRF2 transgene caused HGK activation, myocardial apoptosis, dysfunction, and premature mortality in mice. (9) Conversely, wild-type TRF2 conferred protection against the apoptotic cardiomyopathy provoked by doxorubicin. Conclusions: Activation of the MAP4K, HGK, is a highly generalizable response to pro-apoptotic stress signals in cultured cardiomyocytes and the intact heart. Because loss of TRF2 activates the HGK pathway and activation of the HGK pathway induces TRF2 loss, our findings suggest that loss of TRF2 is reciprocally coupled to activity of the HGK death pathway, as a positive feedback loop that amplifies apoptotic signals.

CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Biochemistry studies - General 10060
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Cardiovascular system - Physiology and biochemistry 14504
Endocrine - General 17002
Muscle - Physiology and biochemistry 17504

INDEX TERMS: Major Concepts
Cardiovascular System (Transport and Circulation)

INDEX TERMS: Parts, Structures, & Systems of Organisms
heart: circulatory system; cardiomyocyte: muscular system, circulatory system; myocardium: muscular system, circulatory system

INDEX TERMS: Chemicals & Biochemicals
TNF-alpha [tumor necrosis factor-alpha]; p53; ceramide; doxorubicin; H2AX; telomeric repeat-binding factor-2 [TRF2]; HPK-GCK-like kinase [MAP4K4]

INDEX TERMS: Miscellaneous Descriptors
oxidative stress; biomechanical stress; premature mortality

ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
mouse (common)
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

REGISTRY NUMBER: 104404-17-3 (ceramide)
23214-92-8 (doxorubicin)

L214 ANSWER 19 OF 22 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:476393 BIOSIS
DOCUMENT NUMBER: PREV200300476393
TITLE: Functional expression of ATM gene carried by HSV amplicon vector in vitro and in vivo.
AUTHOR(S): Qi, Jianguo [Reprint Author]; Manuszak, Ryan [Reprint Author]; ***Shackelford, Rodney*** [Reprint Author]; Cheng, Dong [Reprint Author]; Smith, Michael [Reprint

Author]; Link, Charles J. Jr. [Reprint Author]; ***Wang, Suming*** [Reprint Author]

CORPORATE SOURCE: Stoddard Cancer Research Institute, Des Moines, IA, USA

SOURCE: Proceedings of the American Association for Cancer Research Annual Meeting, (July 2003) Vol. 44, pp. 1097. print.
Meeting Info.: 94th Annual Meeting of the American Association for Cancer Research. Washington, DC, USA. July 11-14, 2003.
ISSN: 0197-016X.

DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 15 Oct 2003
Last Updated on STN: 15 Oct 2003

CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Genetics - General 03502
Genetics - Animal 03506
Biochemistry studies - Proteins, peptides and amino acids 10064
Cardiovascular system - Physiology and biochemistry 14504
Cardiovascular system - Blood vessel pathology 14508
Nervous system - Physiology and biochemistry 20504
Nervous system - Pathology 20506
Genetics of bacteria and viruses 31500
Virology - General and methods 33502
Immunology - Immunopathology, tissue immunology 34508

INDEX TERMS: Major Concepts
Cardiovascular System (Transport and Circulation); Molecular Genetics (Biochemistry and Molecular Biophysics); Nervous System (Neural Coordination)

INDEX TERMS: Parts, Structures, & Systems of Organisms
caudate: nervous system; neuron: nervous system; putamen: nervous system

INDEX TERMS: Diseases
Ataxia-telangiectasia: genetic disease, immune system disease, nervous system disease, vascular disease, genetics
Ataxia Telangiectasia (MeSH)

INDEX TERMS: Chemicals & Biochemicals
ataxia-telangiectasia cDNA [***ataxia-telangiectasia*** complementary DNA]

INDEX TERMS: Methods & Equipment
Western blot: genetic techniques, laboratory techniques; gamma-ray irradiation: clinical techniques, therapeutic and prophylactic techniques; immunohistochemistry: immunologic techniques, laboratory techniques

INDEX TERMS: Miscellaneous Descriptors
cell survival rate; oxidative stress

ORGANISM: Classifier
Herpesviridae 03115
Super Taxa
dsDNA Viruses; Viruses; Microorganisms
Organism Name
Herpes simplex virus type-1 (common) [Human herpesvirus 1 (species)]: gene vector
Taxa Notes
Double-Stranded DNA Viruses, Microorganisms, Viruses

ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
rat (common): adult
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
GENE NAME: rat ATM gene (Muridae): expression, open reading frame

L214 ANSWER 20 OF 22 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:395524 BIOSIS
DOCUMENT NUMBER: PREV200200395524
TITLE: ATM-dependent gene expression changes after different forms of DNA damage.
AUTHOR(S): Heinloth, Alexandra N. [Reprint author]; ***Shackelford, Rodney E.*** [Reprint author]; Innes, Cynthia L. [Reprint author]; Amin, Rupesh P. [Reprint author]; Sieber, Stella G. [Reprint author]; Flores, Kristina G. [Reprint author]; Bennett, Lee [Reprint author]; Bushel, Pierre R. [Reprint author]; Paules, Richard S. [Reprint author]
CORPORATE SOURCE: National Institute of Environmental Health Sciences, Research Triangle Park, NC, USA
SOURCE: Proceedings of the American Association for Cancer Research Annual Meeting, (March, 2002) Vol. 43, pp. 626. print.
Meeting Info.: 93rd Annual Meeting of the American Association for Cancer Research. San Francisco, California, USA. April 06-10, 2002.
ISSN: 0197-016X.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 24 Jul 2002
Last Updated on STN: 29 Aug 2002
CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Genetics - General 03502
Genetics - Human 03508
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Cardiovascular system - Physiology and biochemistry 14504
Cardiovascular system - Blood vessel pathology 14508
Integumentary system - Physiology and biochemistry 18504
Nervous system - Physiology and biochemistry 20504
Nervous system - Pathology 20506
Immunology - Immunopathology, tissue immunology 34508
INDEX TERMS: Major Concepts
Cardiovascular System (Transport and Circulation); Integumentary System (Chemical Coordination and Homeostasis); Molecular Genetics (Biochemistry and Molecular Biophysics); Nervous System (Neural Coordination)
INDEX TERMS: Parts, Structures, & Systems of Organisms
dermal diploid fibroblast: integumentary system
INDEX TERMS: Diseases
ataxia telangiectasia: genetic disease, immune system disease, nervous system disease, vascular disease, genetics

Ataxia Telangiectasia (MeSH)

INDEX TERMS: Chemicals & Biochemicals
DNA; RNA; ***ataxia telangiectasia*** mutated [ATM]: expression; cDNA [complementary DNA]; cyclin E-associated kinase; serine/threonine kinase; t-butyl-hydroperoxide

INDEX TERMS: Miscellaneous Descriptors
DNA damage; UV radiation [ultraviolet radiation]; oxidative stress; Meeting Abstract

REGISTRY NUMBER: 9026-43-1 (SERINE/THREONINE KINASE)

GENE NAME: human ATM gene [human ***ataxia telangiectasia*** mutated gene] (Hominidae): expression

L214 ANSWER 21 OF 22 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1999:177572 BIOSIS

DOCUMENT NUMBER: PREV199900177572

TITLE: The ***ataxia telangiectasia*** gene product is required for oxidative stress-induced G1 and G2 checkpoint functions in human fibroblasts.

AUTHOR(S): ***Shackelford, Rodney E.***; Innes, Cynthia L.; Sieber, Stella O.; Paules, Richard S.

CORPORATE SOURCE: Natl. Inst. Environ. Health Sci., P.O. Box 12233, Research Triangle Park, NC 27709, USA

SOURCE: Proceedings of the American Association for Cancer Research Annual Meeting, (March, 1999) Vol. 40, pp. 742. print.
Meeting Info.: 90th Annual Meeting of the American Association for Cancer Research. Philadelphia, Pennsylvania, USA. April 10-14, 1999. American Association for Cancer Research.
ISSN: 0197-016X.

DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 5 May 1999
Last Updated on STN: 5 May 1999

CONCEPT CODE: Genetics - Human 03508
General biology - Symposia, transactions and proceedings 00520

INDEX TERMS: Major Concepts
Genetics

INDEX TERMS: Parts, Structures, & Systems of Organisms
fibroblasts

INDEX TERMS: Diseases
ataxia telangiectasia: genetic disease, immune system disease, nervous system disease, vascular disease
Ataxia Telangiectasia (MeSH)

INDEX TERMS: Chemicals & Biochemicals
reactive oxygen species; human ***ataxia telangiectasia*** gene

INDEX TERMS: Miscellaneous Descriptors
oxidative stress; G-1 checkpoint function; G-2 checkpoint function; Meeting Abstract

REGISTRY NUMBER: 7782-44-7 (OXYGEN)

L214 ANSWER 22 OF 22 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1997:231253 BIOSIS

DOCUMENT NUMBER: PREV199799530456
TITLE: Characterization of ATM expression in cell cycle checkpoints and cellular senescence.
AUTHOR(S): Afshari, C. A.; Innes, C. L.; Cable, P. L.; ***Shackelford, R.***; Xu, G.; Hill, D.; Paules, R. S.
CORPORATE SOURCE: National Inst. Environmental Health Sciences, Research Triangle Park, NC 27709, USA
SOURCE: Proceedings of the American Association for Cancer Research Annual Meeting, (1997) Vol. 38, No. 0, pp. 157.
Meeting Info.: Eighty-eighth Annual Meeting of the American Association for Cancer Research. San Diego, California, USA. April 12-16, 1997.
ISSN: 0197-016X.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 2 Jun 1997
Last Updated on STN: 9 Jul 1997
CONCEPT CODE: Cytology - Human 02508
Genetics - Human 03508
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Biophysics - Molecular properties and macromolecules 10506
Biophysics - Membrane phenomena 10508
Cardiovascular system - Blood vessel pathology 14508
Nervous system - Pathology 20506
Immunology - Immunopathology, tissue immunology 34508
INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Cardiovascular System (Transport and Circulation); Cell Biology; Genetics; Immune System (Chemical Coordination and Homeostasis); Membranes (Cell Biology); Nervous System (Neural Coordination)
INDEX TERMS: Chemicals & Biochemicals
KINASE
INDEX TERMS: Miscellaneous Descriptors
ANTIBODIES; ***ATAXIA TELANGIECTASIA***; ***ATAXIA TELANGIECTASIA*** GENE; ***ATAXIA TELANGIECTASIA*** MUTANT PROTEIN; CARDIOVASCULAR SYSTEM; CELL BIOLOGY; CELL CYCLE CHECKPOINTS; CELLULAR SENESCENCE; CHROMOSOME ABNORMALITIES; EXPRESSION; FIBROBLASTS; GENETIC DISEASE; GENETICS; IMMUNE SYSTEM; IMMUNE SYSTEM DISEASE; MUTATION; NERVOUS SYSTEM DISEASE; NUCLEAR PROTEIN; PI-3 KINASE FAMILY; VASCULAR DISEASE
REGISTRY NUMBER: 9031-44-1 (KINASE)

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=> □

=> file hcaplus
FILE 'HCAPLUS' ENTERED AT 15:30:14 ON 17 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 17 Jul 2006  VOL 145 ISS 4
FILE LAST UPDATED: 16 Jul 2006  (20060716/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que L54

L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7             6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6)
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                 OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22            4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                 C?/CN
L23           23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                 L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
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L31          24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L42        1665 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/OBI
L43        2356 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/BI
L44           0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS BAR/OBI
L45           8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS BAR/BI
L46           8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS-BAR/BI
L47           0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CEREBELLO OCULOCUTANEOUS
                 TELANGIECT?/BI
L48           0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CEREBELLO OCULOT?/BI
L49        2363 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (ATAXIA (2A) TELANGIECT?)/BI
L50       15362 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CHELATING AGENTS+OLD,NT/CT
L51       40989 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31
L52        2369 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L42 OR L43 OR L44 OR L45 OR
                 L46 OR L47 OR L48 OR L49)
L53       52491 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L50 OR L51)
L54           7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 AND L53


=> d que L56

L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6)
L8            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                 OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21           6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22           4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                 C?/CN
L23          23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                 L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31          24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L37          22 SEA FILE=REGISTRY ABB=ON  PLU=ON  (117-39-5/BI OR 146426-40-6/B
                 I OR 153-18-4/BI OR 17912-87-7/BI OR 446-72-0/BI OR 480-16-0/BI
                  OR 480-18-2/BI OR 480-40-0/BI OR 480-41-1/BI OR 482-39-3/BI
                 OR 490-46-0/BI OR 491-70-3/BI OR 491-80-5/BI OR 50-78-2/BI OR
                 520-26-3/BI OR 520-27-4/BI OR 520-33-2/BI OR 520-36-5/BI OR
                 522-12-3/BI OR 525-82-6/BI OR 577-85-5/BI OR 989-51-5/BI)
L38           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  50-78-2
L39          21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 NOT L38
L42        1665 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/OBI
L43        2356 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/BI
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L44             0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS BAR/OBI
L45             8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS BAR/BI
L46             8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS-BAR/BI
L47             0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CEREBELLO OCULOCUTANEOUS
                  TELANGIECT?/BI
L48             0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CEREBELLO OCULOT?/BI
L49          2363 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (ATAXIA (2A) TELANGIECT?)/BI
L50         15362 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CHELATING AGENTS+OLD,NT/CT
L51         40989 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31
L52          2369 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L42 OR L43 OR L44 OR L45 OR
                  L46 OR L47 OR L48 OR L49)
L53         52491 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L50 OR L51)
L54             7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L52 AND L53
L55         34358 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L39
L56             4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L54 AND L55


=> d que L71

L42          1665 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/OBI
L43          2356 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/BI
L44             0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS BAR/OBI
L45             8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS BAR/BI
L46             8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  LOUIS-BAR/BI
L47             0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CEREBELLO OCULOCUTANEOUS
                  TELANGIECT?/BI
L48             0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CEREBELLO OCULOT?/BI
L49          2363 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (ATAXIA (2A) TELANGIECT?)/BI
L52          2369 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L42 OR L43 OR L44 OR L45 OR
                  L46 OR L47 OR L48 OR L49)
L68         15322 SEA FILE=HCAPLUS ABB=ON  PLU=ON  HYDROXAMIC ACIDS+NT/CT
L69            29 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L68 AND L52
L70        132130 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CHELAT?/BI
L71             3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L69 AND L70


=> s (L54 or L56 or L71) not L208

L215            3 (L54 OR L56 OR L71) NOT L208

=> file medline

FILE 'MEDLINE' ENTERED AT 15:30:19 ON 17 JUL 2006

 FILE LAST UPDATED: 15 JUL 2006 (20060715/UP).  FILE COVERS 1950 TO DATE.

 On December 11, 2005, the 2006 MeSH terms were loaded.

 The MEDLINE reload for 2006 is now (26 Feb.) available.  For details
 on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).
 See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

 OLDMEDLINE is covered back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
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MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que L96

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L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6)
L8            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21           6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22           4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                C?/CN
L23          23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31          24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L83        2457 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/CT
L84        3932 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L85        3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA (2A) TELANGIECTASIA
L86        3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L83 OR L84 OR L85)
L88       13204 SEA FILE=MEDLINE ABB=ON  PLU=ON  CHELATING AGENTS/CT
L89       92986 SEA FILE=MEDLINE ABB=ON  PLU=ON  CHELATING AGENTS+NT/CT
L90        3231 SEA FILE=MEDLINE ABB=ON  PLU=ON  IRON CHELATING AGENTS/CT
L91       19528 SEA FILE=MEDLINE ABB=ON  PLU=ON  IRON CHELATING AGENTS+NT/CT
L92        1267 SEA FILE=MEDLINE ABB=ON  PLU=ON  SIDEROPHORES/CT
L93        6055 SEA FILE=MEDLINE ABB=ON  PLU=ON  SIDEROPHORES+NT/CT
L94             SEL  PLU=ON  L31 1- CHEM :     255 TERMS
L95       68933 SEA FILE=MEDLINE ABB=ON  PLU=ON  L94
L96           7 SEA FILE=MEDLINE ABB=ON  PLU=ON  L86 AND ((L88 OR L89 OR L90
                OR L91 OR L92 OR L93) OR L95)
```

=> d que L98

```
L83        2457 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/CT
L84        3932 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L85        3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA (2A) TELANGIECTASIA
L86        3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L83 OR L84 OR L85)
L97       37091 SEA FILE=MEDLINE ABB=ON  PLU=ON  CHELAT?
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L98             5 SEA FILE=MEDLINE ABB=ON  PLU=ON  L86 AND L97


=> d que L105

L1              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6              2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7              6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                  OR L6)
L8              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                  OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21             6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22             4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                  C?/CN
L23            23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                  OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                  L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31            24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L83          2457 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/CT
L84          3932 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L85          3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA (2A) TELANGIECTASIA
L86          3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L83 OR L84 OR L85)
L88         13204 SEA FILE=MEDLINE ABB=ON  PLU=ON  CHELATING AGENTS/CT
L89         92986 SEA FILE=MEDLINE ABB=ON  PLU=ON  CHELATING AGENTS+NT/CT
L90          3231 SEA FILE=MEDLINE ABB=ON  PLU=ON  IRON CHELATING AGENTS/CT
L91         19528 SEA FILE=MEDLINE ABB=ON  PLU=ON  IRON CHELATING AGENTS+NT/CT
L92          1267 SEA FILE=MEDLINE ABB=ON  PLU=ON  SIDEROPHORES/CT
L93          6055 SEA FILE=MEDLINE ABB=ON  PLU=ON  SIDEROPHORES+NT/CT
L94               SEL  PLU=ON  L31 1- CHEM :     255 TERMS
L95         68933 SEA FILE=MEDLINE ABB=ON  PLU=ON  L94
L96             7 SEA FILE=MEDLINE ABB=ON  PLU=ON  L86 AND ((L88 OR L89 OR L90
                  OR L91 OR L92 OR L93) OR L95)
L100        61053 SEA FILE=MEDLINE ABB=ON  PLU=ON  ANTIOXID?
L101        18939 SEA FILE=MEDLINE ABB=ON  PLU=ON  FLAV!NOID?/BI
L102        32882 SEA FILE=MEDLINE ABB=ON  PLU=ON  FLAVONOIDS+NT/CT
L103              QUE  ABB=ON  PLU=ON  TRANSITION ELEMENTS+NT/CT
L105            3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L96 AND ((L100 OR L101 OR
                  L102 OR L103))


=> d que L108

L1              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
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L2            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6)
L8            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21           6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22           4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                C?/CN
L23          23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31          24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L37          22 SEA FILE=REGISTRY ABB=ON  PLU=ON  (117-39-5/BI OR 146426-40-6/B
                I OR 153-18-4/BI OR 17912-87-7/BI OR 446-72-0/BI OR 480-16-0/BI
                 OR 480-18-2/BI OR 480-40-0/BI OR 480-41-1/BI OR 482-39-3/BI
                OR 490-46-0/BI OR 491-70-3/BI OR 491-80-5/BI OR 50-78-2/BI OR
                520-26-3/BI OR 520-27-4/BI OR 520-33-2/BI OR 520-36-5/BI OR
                522-12-3/BI OR 525-82-6/BI OR 577-85-5/BI OR 989-51-5/BI)
L38           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  50-78-2
L39          21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 NOT L38
L83        2457 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/CT
L84        3932 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L85        3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA (2A) TELANGIECTASIA
L86        3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L83 OR L84 OR L85)
L88       13204 SEA FILE=MEDLINE ABB=ON  PLU=ON  CHELATING AGENTS/CT
L89       92986 SEA FILE=MEDLINE ABB=ON  PLU=ON  CHELATING AGENTS+NT/CT
L90        3231 SEA FILE=MEDLINE ABB=ON  PLU=ON  IRON CHELATING AGENTS/CT
L91       19528 SEA FILE=MEDLINE ABB=ON  PLU=ON  IRON CHELATING AGENTS+NT/CT
L92        1267 SEA FILE=MEDLINE ABB=ON  PLU=ON  SIDEROPHORES/CT
L93        6055 SEA FILE=MEDLINE ABB=ON  PLU=ON  SIDEROPHORES+NT/CT
L94             SEL  PLU=ON  L31 1- CHEM :     255 TERMS
L95       68933 SEA FILE=MEDLINE ABB=ON  PLU=ON  L94
L96           7 SEA FILE=MEDLINE ABB=ON  PLU=ON  L86 AND ((L88 OR L89 OR L90
                OR L91 OR L92 OR L93) OR L95)
L106            SEL  PLU=ON  L39 1- CHEM :     344 TERMS
L107      19788 SEA FILE=MEDLINE ABB=ON  PLU=ON  L106
L108          2 SEA FILE=MEDLINE ABB=ON  PLU=ON  L107 AND L96


=> d que L119

L83        2457 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/CT
L84        3932 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
```

```
L85          3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  ATAXIA (2A) TELANGIECTASIA
L86          3935 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L83 OR L84 OR L85)
L109              QUE  ABB=ON  PLU=ON  FERRIOXAMIN? OR DEFEROXAMIN? OR DESF
                  ERROXAMIN? OR DEFERRIOXAMIN?
L110              QUE  ABB=ON  PLU=ON  EDETIC ACID/CT
L111              QUE  ABB=ON  PLU=ON  CP94
L112              QUE  ABB=ON  PLU=ON  HYDROXAMIC ACIDS/CT
L113              QUE  ABB=ON  PLU=ON  APOFERRITIN/CT
L114              QUE  ABB=ON  PLU=ON  CDTA
L115              QUE  ABB=ON  PLU=ON  DTPA OR PENTATIC ACID
L116              QUE  ABB=ON  PLU=ON  PENICILLAMINE
L117              QUE  ABB=ON  PLU=ON  BATHOCUPROINE
L118              QUE  ABB=ON  PLU=ON  BATHOCUPROIN
L119            6 SEA FILE=MEDLINE ABB=ON  PLU=ON  L86 AND (L109 OR L110 OR L111
                  OR L112 OR L113 OR L114 OR L115 OR L116 OR L117 OR L118)


=> s (L96 or L98 or L105 or L108 or L119) not L209

L216            7 (L96 OR L98 OR L105 OR L108 OR L119) NOT L209

=> file embase

FILE 'EMBASE' ENTERED AT 15:30:24 ON 17 JUL 2006
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 FILE COVERS 1974 TO 17 Jul 2006 (20060717/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

 EMBASE is now updated daily.  SDI frequency remains weekly (default)
 and biweekly.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d que L139

L1               1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2               1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3               1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4               1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5               1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6               2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7               6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                   OR L6)
L8               1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9               1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12              0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                   OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14              0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
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L21           6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22           4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                C?/CN
L23          23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31          24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L128       2332 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA+UF/CT
L129       3044 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L130         62 SEA FILE=EMBASE ABB=ON  PLU=ON  LOUIS BAR
L131          2 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTATICA
L132          0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLOOCULOCU
                TANEA
L133          0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLO
                OCULOCUTANEA
L134       3053 SEA FILE=EMBASE ABB=ON  PLU=ON  (L128 OR L129 OR L130 OR L131
                OR L132 OR L133)
L136      98621 SEA FILE=EMBASE ABB=ON  PLU=ON  CHELATING AGENT+NT/CT
L137          SEL  PLU=ON  L31 1- CHEM :      255 TERMS
L138      61283 SEA FILE=EMBASE ABB=ON  PLU=ON  L137
L139         14 SEA FILE=EMBASE ABB=ON  PLU=ON  L134 AND (L136 OR L138)


=> d que L142

L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6)
L8            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21           6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22           4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                C?/CN
L23          23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31          24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L128       2332 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA+UF/CT
L129       3044 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L130         62 SEA FILE=EMBASE ABB=ON  PLU=ON  LOUIS BAR
L131          2 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTATICA
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L132          0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLOOCULOCU
                TANEA
L133          0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLO
                OCULOCUTANEA
L134       3053 SEA FILE=EMBASE ABB=ON  PLU=ON  (L128 OR L129 OR L130 OR L131
                OR L132 OR L133)
L136      98621 SEA FILE=EMBASE ABB=ON  PLU=ON  CHELATING AGENT+NT/CT
L137            SEL  PLU=ON  L31 1- CHEM :      255 TERMS
L138      61283 SEA FILE=EMBASE ABB=ON  PLU=ON  L137
L139         14 SEA FILE=EMBASE ABB=ON  PLU=ON  L134 AND (L136 OR L138)
L140      25033 SEA FILE=EMBASE ABB=ON  PLU=ON  FLAVONOID+NT/CT
L141      35447 SEA FILE=EMBASE ABB=ON  PLU=ON  ANTIOXIDANT+NT/CT
L142          4 SEA FILE=EMBASE ABB=ON  PLU=ON  L139 AND (L140 OR L141)


=> d que L145

L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6)
L8            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21           6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22           4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                C?/CN
L23          23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31          24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L37          22 SEA FILE=REGISTRY ABB=ON  PLU=ON  (117-39-5/BI OR 146426-40-6/B
                I OR 153-18-4/BI OR 17912-87-7/BI OR 446-72-0/BI OR 480-16-0/BI
                 OR 480-18-2/BI OR 480-40-0/BI OR 480-41-1/BI OR 482-39-3/BI
                OR 490-46-0/BI OR 491-70-3/BI OR 491-80-5/BI OR 50-78-2/BI OR
                520-26-3/BI OR 520-27-4/BI OR 520-33-2/BI OR 520-36-5/BI OR
                522-12-3/BI OR 525-82-6/BI OR 577-85-5/BI OR 989-51-5/BI)
L38           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  50-78-2
L39          21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 NOT L38
L128       2332 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA+UF/CT
L129       3044 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L130         62 SEA FILE=EMBASE ABB=ON  PLU=ON  LOUIS BAR
L131          2 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTATICA
L132          0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLOOCULOCU
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                TANEA
L133            0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLO
                OCULOCUTANEA
L134         3053 SEA FILE=EMBASE ABB=ON  PLU=ON  (L128 OR L129 OR L130 OR L131
                OR L132 OR L133)
L136        98621 SEA FILE=EMBASE ABB=ON  PLU=ON  CHELATING AGENT+NT/CT
L137              SEL  PLU=ON  L31 1- CHEM :      255 TERMS
L138        61283 SEA FILE=EMBASE ABB=ON  PLU=ON  L137
L139           14 SEA FILE=EMBASE ABB=ON  PLU=ON  L134 AND (L136 OR L138)
L143              SEL  PLU=ON  L39 1- CHEM :      344 TERMS
L144        24101 SEA FILE=EMBASE ABB=ON  PLU=ON  L143
L145            2 SEA FILE=EMBASE ABB=ON  PLU=ON  L139 AND L144


=> d que L150

L128         2332 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA+UF/CT
L129         3044 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L130           62 SEA FILE=EMBASE ABB=ON  PLU=ON  LOUIS BAR
L131            2 SEA FILE=EMBASE ABB=ON  PLU=ON  ATAXIA TELANGIECTATICA
L132            0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLOOCULOCU
                TANEA
L133            0 SEA FILE=EMBASE ABB=ON  PLU=ON  TELANGIECTASIA CEREBELLO
                OCULOCUTANEA
L134         3053 SEA FILE=EMBASE ABB=ON  PLU=ON  (L128 OR L129 OR L130 OR L131
                OR L132 OR L133)
L149        31221 SEA FILE=EMBASE ABB=ON  PLU=ON  CHELAT?
L150            4 SEA FILE=EMBASE ABB=ON  PLU=ON  L149 AND L134


=> s (L139 or L142 or l145 or L150) not L210

L217           10 (L139 OR L142 OR L145 OR L150) NOT L210

=> file biosis

FILE 'BIOSIS' ENTERED AT 15:30:29 ON 17 JUL 2006
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 12 July 2006 (20060712/ED)


=> d que L168

L1              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6              2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7              6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6)
L8              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
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L12           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21           6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22           4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                C?/CN
L23          23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31          24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L155       3180 SEA FILE=BIOSIS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L157      38028 SEA FILE=BIOSIS ABB=ON  PLU=ON  CHELAT?
L158            SEL  PLU=ON  L31 1- CHEM :      255 TERMS
L159      59051 SEA FILE=BIOSIS ABB=ON  PLU=ON  L158
L160       3182 SEA FILE=BIOSIS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA?
L163       3396 SEA FILE=BIOSIS ABB=ON  PLU=ON  SIDEROPHOR?
L164         42 SEA FILE=BIOSIS ABB=ON  PLU=ON  SIDEROCHROM?
L165         72 SEA FILE=BIOSIS ABB=ON  PLU=ON  LOUIS BAR
L166       3223 SEA FILE=BIOSIS ABB=ON  PLU=ON  L155 OR L160 OR L165
L167            QUE  ABB=ON  PLU=ON  L157 OR (L163 OR L164) OR L159
L168          7 SEA FILE=BIOSIS ABB=ON  PLU=ON  L166 AND L167


=> d que L172

L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6)
L8            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21           6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22           4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                C?/CN
L23          23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
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                L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31            24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L37            22 SEA FILE=REGISTRY ABB=ON  PLU=ON  (117-39-5/BI OR 146426-40-6/B
                   I OR 153-18-4/BI OR 17912-87-7/BI OR 446-72-0/BI OR 480-16-0/BI
                    OR 480-18-2/BI OR 480-40-0/BI OR 480-41-1/BI OR 482-39-3/BI
                   OR 490-46-0/BI OR 491-70-3/BI OR 491-80-5/BI OR 50-78-2/BI OR
                   520-26-3/BI OR 520-27-4/BI OR 520-33-2/BI OR 520-36-5/BI OR
                   522-12-3/BI OR 525-82-6/BI OR 577-85-5/BI OR 989-51-5/BI)
L38             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  50-78-2
L39            21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 NOT L38
L155         3180 SEA FILE=BIOSIS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L157        38028 SEA FILE=BIOSIS ABB=ON  PLU=ON  CHELAT?
L158              SEL  PLU=ON  L31 1- CHEM :      255 TERMS
L159        59051 SEA FILE=BIOSIS ABB=ON  PLU=ON  L158
L160         3182 SEA FILE=BIOSIS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA?
L163         3396 SEA FILE=BIOSIS ABB=ON  PLU=ON  SIDEROPHOR?
L164           42 SEA FILE=BIOSIS ABB=ON  PLU=ON  SIDEROCHROM?
L165           72 SEA FILE=BIOSIS ABB=ON  PLU=ON  LOUIS BAR
L166         3223 SEA FILE=BIOSIS ABB=ON  PLU=ON  L155 OR L160 OR L165
L167              QUE  ABB=ON  PLU=ON  L157 OR (L163 OR L164) OR L159
L168            7 SEA FILE=BIOSIS ABB=ON  PLU=ON  L166 AND L167
L170              SEL  PLU=ON  L39 1- CHEM :      344 TERMS
L171        31206 SEA FILE=BIOSIS ABB=ON  PLU=ON  L170
L172            3 SEA FILE=BIOSIS ABB=ON  PLU=ON  L171 AND L168


=> d que L173

L1              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6              2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7              6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                  OR L6)
L8              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9              1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                  OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21             6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22             4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                  C?/CN
L23            23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                  OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                  L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31            24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L155         3180 SEA FILE=BIOSIS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
```

```
L157       38028 SEA FILE=BIOSIS ABB=ON  PLU=ON  CHELAT?
L158             SEL  PLU=ON  L31 1- CHEM :      255 TERMS
L159       59051 SEA FILE=BIOSIS ABB=ON  PLU=ON  L158
L160        3182 SEA FILE=BIOSIS ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA?
L161        4049 SEA FILE=BIOSIS ABB=ON  PLU=ON  TRANSITION METAL?
L162         160 SEA FILE=BIOSIS ABB=ON  PLU=ON  TRANSITION ELEM?
L163        3396 SEA FILE=BIOSIS ABB=ON  PLU=ON  SIDEROPHOR?
L164          42 SEA FILE=BIOSIS ABB=ON  PLU=ON  SIDEROCHROM?
L165          72 SEA FILE=BIOSIS ABB=ON  PLU=ON  LOUIS BAR
L166        3223 SEA FILE=BIOSIS ABB=ON  PLU=ON  L155 OR L160 OR L165
L167             QUE  ABB=ON  PLU=ON  L157 OR (L163 OR L164) OR L159
L168           7 SEA FILE=BIOSIS ABB=ON  PLU=ON  L166 AND L167
L173           0 SEA FILE=BIOSIS ABB=ON  PLU=ON  L168 AND (L161 OR L162)


=> s (L168 or L172 or L173) not L211

L218           3 (L168 OR L172 OR L173) NOT L211

=> file uspatfull

FILE 'USPATFULL' ENTERED AT 15:30:33 ON 17 JUL 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 13 Jul 2006 (20060713/PD)
FILE LAST UPDATED: 13 Jul 2006 (20060713/ED)
HIGHEST GRANTED PATENT NUMBER: US7076805
HIGHEST APPLICATION PUBLICATION NUMBER: US2006156447
CA INDEXING IS CURRENT THROUGH 11 Jul 2006 (20060711/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 13 Jul 2006 (20060713/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2006
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2006


=> d que L185

L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7             6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6)
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                 OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22            4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
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              C?/CN
L23           23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                 L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31           24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L183        5870 SEA FILE=USPATFULL ABB=ON  PLU=ON  L31
L184        2355 SEA FILE=USPATFULL ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L185           6 SEA FILE=USPATFULL ABB=ON  PLU=ON  L183 AND L184


=> d que L187

L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE/CN
L2             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B/CN
L3             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B C?/CN
L4             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B H?/CN
L5             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B M?/CN
L6             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  FERRIOXAMINE B P?/CN
L7             6 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6)
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CP 94/CN
L9             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  EDTA/CN
L10            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "EDTA (CHELATING AGENT)"/CN
L11            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DEFEROXAMINE B MESYLATE/CN
L12            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L7
L13            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ("DEFEROXAMINE MESYLATE"/CN
                 OR "DEFEROXAMINE METHANESULFONATE"/CN)
L14            0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND L7
L15            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL/CN
L16            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DESFERAL M?/CN
L17            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  APOFERRITIN?/CN
L18            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  CDTA/CN
L19            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DTPA/CN
L20            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PENICILLAMINE/CN
L21            6 SEA FILE=REGISTRY ABB=ON  PLU=ON  BATHOCUP?/CN
L22            4 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIETHYLENETRIAMINE PENTAACETI
                 C?/CN
L23           23 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4 OR L5
                 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
                 L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)
L29            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  70-51-9
L31           24 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 OR L29
L37           22 SEA FILE=REGISTRY ABB=ON  PLU=ON  (117-39-5/BI OR 146426-40-6/B
                 I OR 153-18-4/BI OR 17912-87-7/BI OR 446-72-0/BI OR 480-16-0/BI
                  OR 480-18-2/BI OR 480-40-0/BI OR 480-41-1/BI OR 482-39-3/BI
                 OR 490-46-0/BI OR 491-70-3/BI OR 491-80-5/BI OR 50-78-2/BI OR
                 520-26-3/BI OR 520-27-4/BI OR 520-33-2/BI OR 520-36-5/BI OR
                 522-12-3/BI OR 525-82-6/BI OR 577-85-5/BI OR 989-51-5/BI)
L38            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  50-78-2
L39           21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 NOT L38
L183        5870 SEA FILE=USPATFULL ABB=ON  PLU=ON  L31
L184        2355 SEA FILE=USPATFULL ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA
L185           6 SEA FILE=USPATFULL ABB=ON  PLU=ON  L183 AND L184
L186        1795 SEA FILE=USPATFULL ABB=ON  PLU=ON  L39
L187           1 SEA FILE=USPATFULL ABB=ON  PLU=ON  L185 AND L186


=> s (L185 or L187) not l212
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L219          5 (L185 OR L187) NOT L212

=> file wpix

FILE 'WPIX' ENTERED AT 15:30:37 ON 17 JUL 2006
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FILE LAST UPDATED:          14 JUL 2006      <20060714/UP>
MOST RECENT DERWENT UPDATE:     200645        <200645/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<

>>> FOR FURTHER DETAILS ON THE FORTHCOMING DERWENT WORLD PATENTS
    INDEX ENHANCEMENTS PLEASE VISIT:
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<
'BIX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> d que L197

L188        247 SEA FILE=WPIX ABB=ON  PLU=ON  ATAXIA TELANGIECTASIA/BIX
L195       5533 SEA FILE=WPIX ABB=ON  PLU=ON  (RAAMBT/DCN OR RAGNQ8/DCN OR
                RA0DFA/DCN OR RA0EMC/DCN OR RA0JBK/DCN OR RA00TF/DCN OR
                RA0055/DCN OR RA021P/DCN OR RA0529/DCN OR RA1HHQ/DCN OR
                RA1XA5/DCN OR RA37W9/DCN OR R00064/DCN OR R00195/DCN OR
                R00268/DCN OR R00971/DCN OR R01179/DCN OR R01318/DCN OR
                R01319/DCN OR R03811/DCN OR R03812/DCN OR R03949/DCN OR
                R04870/DCN OR R06069/DCN OR R06174/DCN OR R06413/DCN OR
                R06747/DCN OR R07001/DCN OR R07027/DCN OR R08105/DCN OR
                R08504/DCN OR R09163/DCN OR R09222/DCN OR R09884/DCN OR
                R11605/DCN OR R19085/DCN OR R19452/DCN OR R20811/DCN OR
                R22037/DCN)
L197          2 SEA FILE=WPIX ABB=ON  PLU=ON  L188 AND L195


=> s L197 not L213

L220          2 L197 NOT L213

=> => dup rem L215 L216 L217 L218 L219 L220
FILE 'HCAPLUS' ENTERED AT 15:31:21 ON 17 JUL 2006
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FILE 'BIOSIS' ENTERED AT 15:31:21 ON 17 JUL 2006
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FILE 'USPATFULL' ENTERED AT 15:31:21 ON 17 JUL 2006
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FILE 'WPIX' ENTERED AT 15:31:21 ON 17 JUL 2006
COPYRIGHT (C) 2006 THE THOMSON CORPORATION
PROCESSING COMPLETED FOR L215
PROCESSING COMPLETED FOR L216
PROCESSING COMPLETED FOR L217
PROCESSING COMPLETED FOR L218
PROCESSING COMPLETED FOR L219
PROCESSING COMPLETED FOR L220
L221 24 DUP REM L215 L216 L217 L218 L219 L220 (6 DUPLICATES REMOVED)
ANSWERS '1-3' FROM FILE HCAPLUS
ANSWERS '4-9' FROM FILE MEDLINE
ANSWERS '10-16' FROM FILE EMBASE
ANSWER '17' FROM FILE BIOSIS
ANSWERS '18-22' FROM FILE USPATFULL
ANSWERS '23-24' FROM FILE WPIX

=> d ibib abs hitind hitstr L221 1-3; d iall L221 4-17; d ibib abs kwic hitstr L221 18-22; d iall ind L221 23-24

L221 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2005:1214439 HCAPLUS
DOCUMENT NUMBER: 144:18854
TITLE: Tachpyridine, a metal chelator, induces G2 cell-cycle arrest, activates checkpoint kinases, and sensitizes cells to ionizing radiation
AUTHOR(S): Turner, JoLyn; Koumenis, Constantinos; Kute, Timothy E.; Planalp, Roy P.; Brechbiel, Martin W.; Beardsley, Dillon; Cody, Brooke; Brown, Kevin D.; Torti, Frank M.; Torti, Suzy V.
CORPORATE SOURCE: Department of Biochemistry, Wake Forest University Health Sciences, Durham, NH, USA
SOURCE: Blood (2005), 106(9), 3191-3199
CODEN: BLOOAW; ISSN: 0006-4971
PUBLISHER: American Society of Hematology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Iron is critical for cell growth and proliferation. Iron chelators are being explored for a number of clin. applications, including the treatment of neurodegenerative disorders, heart disease, and cancer. To uncover mechanisms of action of tachpyridine, a chelator currently undergoing preclin. evaluation as an anticancer agent, cell-cycle anal. was performed. Tachpyridine arrested cells at G2, a radiosensitive phase of the cell cycle, and enhanced the sensitivity of cancer cells but not nontransformed cells to ionizing radiation. G2 arrest was p53 independent and was accompanied by activation of the checkpoint kinases CHK1 and CHK2. G2 arrest was blocked by UCN-01, a CHK1 inhibitor, but proceeded in CHK2 knock-out cells, indicating a critical role for CHK1 in G2 arrest. Tachpyridine-induced cell-cycle arrest was abrogated in cells treated with caffeine, an inhibitor of the ***ataxia-telangiectasia*** mutated/***ataxia-telangiectasia***-mutated and Rad3-related (ATM/ATR) kinases. Further, G2 arrest proceeded in ATM-deficient cells but was blocked in ATR-deficient cells, implicating ATR as the proximal kinase in tachpyridine-mediated G2 arrest. Collectively, our results suggest that iron chelators may function as antitumor and radioenhancing agents and uncover a previously unexplored activity of iron chelators in

activation of ATR and checkpoint kinases.
CC 8-9 (Radiation Biochemistry)
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ATM (***ataxia telangiectasia*** mutated); metal chelator tachpyridine as antitumor radiosensitizer and effect on cell cycle and checkpoint kinases)
IT Antitumor agents
Chelating agents
Human
Radiosensitizers, biological
Radiotherapy
(metal chelator tachpyridine as antitumor radiosensitizer and effect on cell cycle and checkpoint kinases)
REFERENCE COUNT: 83 THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L221 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:266901 HCAPLUS
DOCUMENT NUMBER: 140:302341
TITLE: Protein complexes of the tumor necrosis factor-α signalling pathway for diagnosis, therapy and drug screening
INVENTOR(S): Bouwmeester, Tewis; Huhse, Bettina; Bauch, Angela; Ruffner, Heinz; Bauer, Andreas; Kruse, Ulrich; Kuester, Bernhard; Superti-Furga, Guilio
PATENT ASSIGNEE(S): Cellzome Ag, Germany
SOURCE: Eur. Pat. Appl., 549 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1403282	A1	20040331	EP 2002-21809	20020926
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
WO 2004035783	A2	20040429	WO 2003-EP50655	20030924
WO 2004035783	C2	20040930		
WO 2004035783	A3	20041111		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003298261	A1	20040504	AU 2003-298261	20030924

PRIORITY APPLN. INFO.:			
EP 2002-21809	A	20020926
EP 2003-100274	A	20030210
WO 2003-EP50655	W	20030924

AB The present invention relates to protein complexes of the Tumor necrosis factor-α-signaling pathway, component proteins of said complexes, fragments and derivs. of the component proteins and antibodies specific to the complexes. The present invention also relates to methods for use of

the complexes of the TNF-α-signaling pathway and their interaction in screening, diagnosis and therapy as well to methods of preparing the complexes. Pharmaceutical compns. comprising the protein complexes and antibodies specific to the complexes are especially useful for diagnosis and treatment of inflammation, infection, neurodegenerative disease and cancer.

IC ICM C07K014-705
ICS C07K014-715; C07K016-28; C07K017-00; A61K038-17; G01N033-50

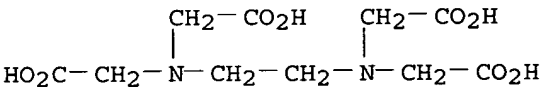
CC 15-5 (Immunochemistry)
Section cross-reference(s): 1, 3, 9, 63

IT Proteins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(***ataxia-telangiectasia*** group D-associated; protein complexes of the tumor necrosis factor-α signalling pathway and antibodies for drug screening and for diagnosis and therapy)

IT ***60-00-4***, EDTA, biological studies 75-12-7, Formamide, biological studies 1185-53-1, Tris hydrochloride 9003-39-8, PVP 9042-14-2, Dextran sulfate
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(protein complexes of the tumor necrosis factor-α signalling pathway and antibodies for drug screening and for diagnosis and therapy of inflammation, infection, neurodegenerative disease and cancer)

IT ***60-00-4***, EDTA, biological studies
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(protein complexes of the tumor necrosis factor-α signalling pathway and antibodies for drug screening and for diagnosis and therapy of inflammation, infection, neurodegenerative disease and cancer)

RN 60-00-4 HCAPLUS
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L221 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:397930 HCAPLUS
DOCUMENT NUMBER: 136:374807
TITLE: Cosmetic or pharmaceutical composition based on lipoic acid and pyruvic acid
INVENTOR(S): Gianfranco de Paoli, Ambrosi
PATENT ASSIGNEE(S): General Topics S.R.L., Italy
SOURCE: Ital., 20 pp.
CODEN: ITXXBY
DOCUMENT TYPE: Patent
LANGUAGE: Italian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IT 1299623	B1	20000324	IT 1998-BS10	19980223

PRIORITY APPLN. INFO.: IT 1998-BS10 19980223

AB The invention concerns a composition for cosmetic or pharmaceutical use which contains as active ingredients at least lipoic acid (both reduced form and dehydrolipoic acid) and pyruvic acid, their salts, esters, and amides and stereoisomers. Each may be present in amts. from 0.0001 to 90% weight/weight

IC ICM A61K

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 62

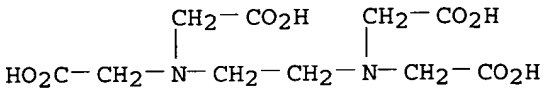
IT Nervous system, disease
(***ataxia telangiectasia***; cosmetic or pharmaceutical composition based on lipoic acid and pyruvic acid)

IT 50-21-5, 2-Hydroxypropanoic acid, biological studies 50-81-7, Ascorbic acid, biological studies 52-90-4, Cysteine, biological studies 56-40-6, Glycine, biological studies 56-41-7, Alanine, biological studies 56-45-1, Serine, biological studies 56-84-8, Aspartic acid, biological studies 56-85-9, Glutamine, biological studies 56-86-0, Glutamic acid, biological studies 56-87-1, Lysine, biological studies 57-10-3, Palmitic acid, biological studies 57-11-4, Octadecanoic acid, biological studies 58-85-5, Biotin 59-30-3, Folic acid, biological studies 59-43-8, Thiamine, biological studies 59-67-6, Niacin, biological studies ***60-00-4***, Ethylenediaminetetraacetic acid, biological studies 60-18-4, Tyrosine, biological studies 60-33-3, Linoleic acid, biological studies 61-90-5, Leucine, biological studies 63-68-3, Methionine, biological studies 63-91-2, Phenylalanine, biological studies 65-23-6, Pyridoxine 66-72-8, Pyridoxal 68-26-8, Retinol 69-72-7, 2-Hydroxybenzoic acid, biological studies 70-47-3, Asparagine, biological studies 71-00-1, Histidine, biological studies 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 73-22-3, Tryptophan, biological studies 73-32-5, Isoleucine, biological studies 74-79-3, Arginine, biological studies 79-14-1, Hydroxyethanoic acid, biological studies 79-83-4, Pantothenic acid 81-13-0, Panthenol 83-88-5, Riboflavin, biological studies 87-69-4, 2,3-Dihydroxybutanedioic acid, biological studies 98-92-0, Nicotinamide 105-45-3 107-35-7, Taurine 112-80-1, Oleic acid, biological studies 114-07-8, Erythromycin 116-31-4, Retinaldehyde 123-31-9, Hydroquinone, biological studies 127-17-3, Pyruvic acid, biological studies 127-17-3D, Pyruvic acid, derivs. 141-97-9 143-07-7, Lauric acid, biological studies 147-85-3, Proline, biological studies 150-13-0 ***153-18-4***, Rutin 302-79-4, Retinoic acid 373-49-9, Palmitoleic acid 443-48-1, Metronidazol 463-40-1, Linolenic acid 464-92-6, Asiatic acid 473-81-4, 2,3-Dihydroxypropanoic acid 506-32-1, Arachidonic acid 526-95-4, Gluconic acid 541-50-4, biological studies 544-63-8, Myristic acid, biological studies 544-64-9, Myristoleic acid 557-59-5, Lignoceric acid 600-15-7, 2-Hydroxybutanoic acid 600-22-6 617-35-6 693-72-1, Vaccenic acid 1200-22-2, Lipoic acid 1200-22-2D, Lipoic acid, derivs. 3380-34-5, Triclosan 3416-24-8, Glucosamine 6556-12-3, Glucuronic acid 7235-40-7, β Carotene 7512-17-6, Acetylglucosamine 9004-61-9, Hyaluronic acid 10118-90-8, Minocycline 16830-15-2, Asiaticoside 18323-44-9, Clindamycin 18449-41-7, Madecassic acid 29204-02-2, Gadoleic acid 34540-22-2, Madecassoside 38882-78-9 55306-03-1, Sericic acid 55306-04-2, Sericoside
RL: COS (Cosmetic use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(cosmetic or pharmaceutical composition based on lipoic acid and pyruvic acid)

IT ***60-00-4***, Ethylenediaminetetraacetic acid, biological studies
153-18-4, Rutin
RL: COS (Cosmetic use); PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study);

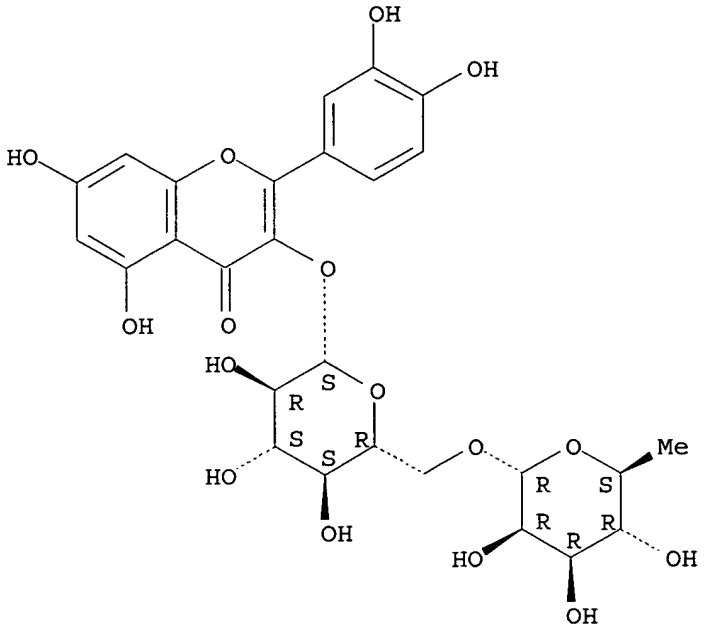
PROC (Process); USES (Uses)
(cosmetic or pharmaceutical composition based on lipoic acid and pyruvic acid)

RN 60-00-4 HCAPLUS
CN Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)



RN 153-18-4 HCAPLUS
CN 4H-1-Benzopyran-4-one, 3-[[6-O-(6-deoxy-α-L-mannopyranosyl)-β-D-glucopyranosyl]oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L221 ANSWER 4 OF 24 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2006242510 IN-PROCESS
DOCUMENT NUMBER: PubMed ID: 16651613
TITLE: SUMOylation attenuates sensitivity toward hypoxia- or ***desferroxamine***-induced injury by modulating adaptive responses in salivary epithelial cells.
AUTHOR: Nguyen Ha-Van; Chen Jo-Lin; Zhong Jenny; Kim Kwang-Jin; Crandall Edward D; Borok Zea; Chen Yuan; Ann David K
CORPORATE SOURCE: Department of Molecular Pharmacology and Toxicology, University of Southern California, Los Angeles 90033-1049, USA.
CONTRACT NUMBER: CA-94595 (NCI)
HL-38578 (NHLBI)

HL-38621 (NHLBI)
HL-38658 (NHLBI)
HL-62569 (NHLBI)
HL-64365 (NHLBI)
R01-DE-10742 (NIDCR)
R01-DE-14183 (NIDCR)
SOURCE: The American journal of pathology, (2006 May) Vol. 168, No. 5, pp. 1452-63.
Journal code: 0370502. ISSN: 0002-9440.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: NONMEDLINE; IN-PROCESS; NONINDEXED; Abridged Index Medicus Journals; Priority Journals
ENTRY DATE: Entered STN: 3 May 2006
Last Updated on STN: 23 May 2006

ABSTRACT:
Hypoxic stress activates various signal transduction pathways including posttranslational modification with the ubiquitin-like SUMO protein (SUMOylation). However, the molecular mechanisms by which SUMOylation regulates hypoxic responses remain unclear. Here, we investigated the ability of rat salivary Pa-4 epithelial cells to resist cell injury elicited by 1% O(2)- or hypoxia-mimetic ***desferroxamine*** (DFO)-stimulated SUMOylation processes. By using Pa-4 cells stably transduced with lenti-SUMO-1 and a cell-permeant peptide harboring SUMO-binding motif to interfere with SUMO-dependent protein-protein interactions, we demonstrate that SUMOylation augments cell survival against DFO treatment. This appeared to be partly mediated through attenuation of Protein Kinase C (PKC)-delta activation and caspase-3 cleavage, hallmarks of pro-apoptotic signaling. Intriguingly, DFO-induced phosphorylation of DNA damage marker ***ataxia***-***telangiectasia*** -mutated protein S1981 preceded activation of PKCdelta and caspase-3. Constitutive SUMOylation facilitated 1% O(2)- or DFO-induced nuclear factor kappaB transactivation, possibly via activation of genotoxic signaling cascade. In addition, we observed transient preservation of transepithelial electrical resistance during the early stage of hypoxia (1% O(2)) as well as enhanced transepithelial electrical resistance recovery after prolonged hypoxia in SUMO-1-expressing cell monolayers. In conclusion, our results unveil a previously unrecognized mechanism by which SUMOylation and activation of ***ataxia-telangiectasia***-mutated protein, PKCdelta, caspase-3, and nuclear factor kappaB signaling pathways modulate salivary adaptive responses to stress in cells exposed to either 1% O(2) or DFO.

L221 ANSWER 5 OF 24 MEDLINE on STN DUPLICATE 3

ACCESSION NUMBER: 97433222 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9288891
TITLE: Use of a postlabelling assay to examine the removal of radiation-induced DNA lesions by purified enzymes and human cell extracts.
AUTHOR: Weinfeld M; Lee J; Ruiqi G; Karimi-Busheri F; Chen D; Allalunis-Turner J
CORPORATE SOURCE: Department of Oncology, University of Alberta, Cross Cancer Institute, Edmonton, Canada.. mweinfel@gpu.srv.ualberta.ca
SOURCE: Mutation research, (1997 Aug 1) Vol. 378, No. 1-2, pp. 127-37.
Journal code: 0400763. ISSN: 0027-5107.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals

ENTRY MONTH: 199709
ENTRY DATE: Entered STN: 8 Oct 1997
Last Updated on STN: 8 Oct 1997
Entered Medline: 25 Sep 1997

ABSTRACT:
We have used a 32P-postlabelling assay to examine the activity of purified Esherichia coli endonuclease IV, human apurinic/apyrimidinic endonuclease I and human cell-free extracts towards irradiated DNA. The assay can detect thymine glycols, 3'-phosphoglycolate groups and at least one other major lesion that has yet to be fully characterized. It was observed that endonuclease IV removed the phosphoglycolates and the uncharacterized lesion(s) suggesting that the latter are abasic sites with modified deoxyribose residues. The purified human enzyme acted only on the phosphoglycolate residues. Cell-free extract, prepared from A549 lung carcinoma cells by sonication or treatment with toluene, efficiently removed the phosphoglycolate and unknown lesions, but was less reactive towards thymine glycols. The extract was completely inactivated by heating at 60 degrees C for 10 min. Removal of the unknown product and phosphoglycolate did not require magnesium, but 1 mM ***EDTA*** did inhibit release of the latter. The cell-free extract exhibited substantially more activity towards native than heat-denatured DNA. A comparison of extracts prepared from 4 cell lines displaying a range of radiosensitivities, including an ***ataxia telangiectasia*** cell line, showed that all
contained similar levels of repair activity towards the detectable lesions.

CONTROLLED TERM:
Cell Extracts
Cell Survival
*DNA: ME, metabolism
DNA: RE, radiation effects
*DNA Damage
*DNA Repair
DNA, Single-Stranded: ME, metabolism
DNA-(Apurinic or Apyrimidinic Site) Lyase
*Deoxyribonuclease I: ME, metabolism
Deoxyribonuclease IV (Phage T4-Induced)
Electrophoresis, Polyacrylamide Gel
Escherichia coli: EN, enzymology
*Escherichia coli Proteins
Gamma Rays: AE, adverse effects
Glycolates: ME, metabolism
Humans
*Lyases: ME, metabolism
Magnesium: PD, pharmacology
Nucleic Acid Denaturation
Phosphorus Radioisotopes: ME, metabolism
Research Support, Non-U.S. Gov't
Thymine: AA, analogs & derivatives
Thymine: ME, metabolism
Tumor Cells, Cultured

CAS REGISTRY NO.: 13147-57-4 (phosphoglycolate); 2943-56-8 (thymine glycol); 65-71-4 (Thymine); 7439-95-4 (Magnesium); 9007-49-2 (DNA)

CHEMICAL NAME: 0 (Cell Extracts); 0 (DNA, Single-Stranded); 0 (Escherichia coli Proteins); 0 (Glycolates); 0 (Phosphorus Radioisotopes); EC 3.1.21.1 (Deoxyribonuclease I); EC 3.1.21.2 (Deoxyribonuclease IV (Phage T4-Induced)); EC 3.1.21.2 (endonuclease IV, E coli); EC 4. (Lyases); EC 4.2.99.18 (DNA-(Apurinic or Apyrimidinic Site) Lyase)

L221 ANSWER 6 OF 24 MEDLINE on STN
ACCESSION NUMBER: 2004083906 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14716295
TITLE: The EBNA-3 gene family proteins disrupt the G2/M

checkpoint.

AUTHOR: Krauer Kenia G; Burgess Andrew; Buck Marion; Flanagan James; Sculley Tom B; Gabrielli Brian
CORPORATE SOURCE: Queensland Institute of Medical Research and Joint Oncology Program, University of Queensland, Brisbane, Australia.. keniaK@qimr.edu.au

SOURCE: Oncogene, (2004 Feb 19) Vol. 23, No. 7, pp. 1342-53. Journal code: 8711562. ISSN: 0950-9232.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200403
ENTRY DATE: Entered STN: 20 Feb 2004
Last Updated on STN: 11 Mar 2004
Entered Medline: 10 Mar 2004

ABSTRACT:
The Epstein-Barr nuclear antigens (EBNA), EBNA-3, -4 and -6, have previously been shown to act as transcriptional regulators, however, this study identifies another function for these proteins, disruption of the G2/M checkpoint. Lymphoblastoid cell lines (LCLs) treated with a G2/M initiating drug azelaic bishydroxamine (ABHA) did not show a G2/M checkpoint response, but rather they display an increase in cell death, a characteristic of sensitivity to the cytotoxic effects of the drug. Cell cycle analysis demonstrated that the individual expression of EBNA-3, -4 or -6 are capable of disrupting the G2/M checkpoint response induced by ABHA resulting in increased toxicity, whereas EBNA-2, and -5 were not. EBNA-3 gene family protein expression also disrupted the G2/M checkpoint initiated in response to the genotoxin etoposide and the S phase inhibitor hydroxyurea. The G2 arrest in response to these drugs were sensitive to caffeine, suggesting that ATM/ATR signalling in these checkpoint responses may be blocked by the EBNA-3 family proteins. The function of EBNA-3, -4 and -6 proteins appears to be more complex than anticipated and these data suggest a role for these proteins in disrupting the host cell cycle machinery.

CONTROLLED TERM: *Cell Cycle Proteins
DNA Damage: PH, physiology
DNA-Binding Proteins
Epstein-Barr Virus Nuclear Antigens: IM, immunology
*Epstein-Barr Virus Nuclear Antigens: ME, metabolism
G2 Phase: DE, drug effects
*G2 Phase: PH, physiology
Histone Deacetylases: AI, antagonists & inhibitors
Humans
Hydroxamic Acids: PD, pharmacology
Mitosis: DE, drug effects
*Mitosis: PH, physiology
Precipitin Tests
Protein-Serine-Threonine Kinases: IM, immunology
Protein-Serine-Threonine Kinases: ME, metabolism
Research Support, Non-U.S. Gov't
Signal Transduction: PH, physiology
Tumor Suppressor Proteins
CAS REGISTRY NO.: 18992-11-5 (azelaic bishydroxamic acid)
CHEMICAL NAME: 0 (Cell Cycle Proteins); 0 (DNA-Binding Proteins); 0 (Epstein-Barr Virus Nuclear Antigens); 0 (Hydroxamic Acids); 0 (Tumor Suppressor Proteins); EC 2.7.1.- (ATR protein, human); EC 2.7.1.37 (Protein-Serine-Threonine Kinases); EC 2.7.1.37 (***ataxia telangiectasia*** mutated protein); EC 2.7.1.37 (checkpoint kinase 2); EC 3.5.1.- (Histone Deacetylases)

L221 ANSWER 7 OF 24 MEDLINE on STN
ACCESSION NUMBER: 2003256335 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12782595
TITLE: Histone deacetylase inhibitors activate p21(WAF1) expression via ATM.
AUTHOR: Ju Rong; Muller Mark T
CORPORATE SOURCE: Department of Molecular Genetics, The Ohio State University, Columbus, Ohio 43210, USA.
SOURCE: Cancer research, (2003 Jun 1) Vol. 63, No. 11, pp. 2891-7. Journal code: 2984705R. ISSN: 0008-5472.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200307
ENTRY DATE: Entered STN: 4 Jun 2003
Last Updated on STN: 1 Aug 2003
Entered Medline: 31 Jul 2003

ABSTRACT:
Histone deacetylase (HDAC) inhibitors are known to induce expression of genes such as p21(WAF1), thereby, leading to cell cycle arrest. In this work, we show that p21(WAF1) induction by HDAC inhibitors (depsipeptide and trichostatin A) is defective in ***Ataxia telangiectasia*** (AT) cells but normal in matched wild-type (WT) cells (human diploid fibroblasts). To verify the role of ATM in this effect, we show that ectopic expression of the WT ATM gene in an AT cell line fully restores p21(WAF1) induction by the HDAC inhibitors. Furthermore, because caffeine and wortmannin attenuate p21(WAF1) induction in WT cells, it is probable that the phosphatidylinositol 3'-kinase activity is essential for this process. Besides the p21(WAF1) promoter, activation of topoisomerase IIIalpha and SV40 promoters by the HDAC inhibitors are also decreased in the AT cell lines relative to WT cells; thus, these findings pertain to other promoters. Finally, despite the obvious induction deficiency of gene expression, the overall levels of H3 and H4 histone acetylation appear to be the same between AT and normal cells in response to HDAC inhibitor treatments. Taken together, the data indicate that ATM is involved in histone acetylation-mediated gene regulation.

CONTROLLED TERM:
1-Phosphatidylinositol 3-Kinase: ME, metabolism
Acetylation
Ataxia Telangiectasia: PA, pathology
Cell Cycle Proteins
Cyclin-Dependent Kinase Inhibitor p21
*Cyclins: BI, biosynthesis
Cyclins: GE, genetics
DNA-Binding Proteins
*Depsipeptides
Enzyme Inhibitors: PD, pharmacology
Gene Expression Regulation: PH, physiology
*Histone Deacetylases: AI, antagonists & inhibitors
Histones: GE, genetics
Histones: ME, metabolism
Humans
Hydroxamic Acids: PD, pharmacology
Peptides, Cyclic: PD, pharmacology
Phosphorylation
Promoter Regions (Genetics): DE, drug effects
Protein-Serine-Threonine Kinases: BI, biosynthesis
Protein-Serine-Threonine Kinases: GE, genetics
*Protein-Serine-Threonine Kinases: PH, physiology
Transfection

Tumor Suppressor Proteins
CAS REGISTRY NO.: 128517-07-7 (FR 901228); 58880-19-6 (trichostatin A)
CHEMICAL NAME: 0 (CDKN1A protein, human); 0 (Cell Cycle Proteins); 0 (Cyclin-Dependent Kinase Inhibitor p21); 0 (Cyclins); 0 (DNA-Binding Proteins); 0 (Depsipeptides); 0 (Enzyme Inhibitors); 0 (Histones); 0 (Hydroxamic Acids); 0 (Peptides, Cyclic); 0 (Tumor Suppressor Proteins); EC 2.7.1.137 (1-Phosphatidylinositol 3-Kinase); EC 2.7.1.37 (Protein-Serine-Threonine Kinases); EC 2.7.1.37 (***ataxia telangiectasia*** mutated protein); EC 3.5.1.- (Histone Deacetylases)

L221 ANSWER 8 OF 24 MEDLINE on STN
ACCESSION NUMBER: 97459668 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9315628
TITLE: Regulation of p53 by metal ions and by ***antioxidants*** : dithiocarbamate down-regulates p53 DNA-binding activity by increasing the intracellular level of copper.
AUTHOR: Verhaegh G W; Richard M J; Hainaut P
CORPORATE SOURCE: Unit of Mechanisms of Carcinogenesis, International Agency for Research on Cancer, Lyon, France.
SOURCE: Molecular and cellular biology, (1997 Oct) Vol. 17, No. 10, pp. 5699-706.
Journal code: 8109087. ISSN: 0270-7306.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199710
ENTRY DATE: Entered STN: 5 Nov 1997
Last Updated on STN: 17 Dec 2002
Entered Medline: 23 Oct 1997

ABSTRACT:
Mutations in the p53 tumor suppressor gene frequently fall within the specific DNA-binding domain and prevent the molecule from transactivating normal targets. DNA-binding activity is regulated in vitro by metal ions and by redox conditions, but whether these factors also regulate p53 in vivo is unclear. To address this question, we have analyzed the effect of pyrrolidine dithiocarbamate (PDTC) on p53 DNA-binding activity in cell lines expressing wild-type p53. PDTC is commonly regarded as an ***antioxidant***, but it can also bind and transport external copper ions into cells and thus exert either pro- or ***antioxidant*** effects in different situations. We report that PDTC, but not N-acetyl-L-cysteine, down-regulated the specific DNA-binding activity of p53. Loss of DNA binding correlated with disruption of the immunologically "wild-type" p53 conformation. Using different ***chelators*** to interfere with copper transport by PDTC, we found that ***bathocuproinedisulfonic*** ***acid*** (***BCS***), a non-cell-permeable ***chelator*** of Cu1+, prevented both copper import and p53 down-regulation. In contrast, 1,10-orthophenanthroline, a cell-permeable ***chelator*** of Cu2+, promoted the redox activity of copper and up-regulated p53 DNA-binding activity through a DNA damage-dependent pathway. We have previously reported that p53 protein binds copper in vitro in the form of Cu1+ (P. Hainaut, N. Rolley, M. Davies, and J. Milner, Oncogene 10:27-32, 1995). The data reported here indicate that intracellular levels and redox activity of copper are critical for p53 protein conformation and DNA-binding activity and suggest that copper ions may participate in the physiological control of p53 function.
CONTROLLED TERM: Acetylcysteine: PD, pharmacology
Antioxidants: PD, pharmacology
Cell Cycle

Cell Cycle Proteins
Cell Line
Chelating Agents: PD, pharmacology
Copper: ME, metabolism
Cyclin-Dependent Kinase Inhibitor p21
Cyclins: BI, biosynthesis
DNA: ME, metabolism
DNA Damage
DNA-Binding Proteins
Humans
Hydrogen Peroxide: PD, pharmacology
Intercalating Agents: PD, pharmacology
Ion Transport: DE, drug effects
Lipid Peroxidation
Oxidation-Reduction
Oxidative Stress
Phenanthrolines: PD, pharmacology
Protein Binding: DE, drug effects
Protein Conformation: DE, drug effects
*Protein-Serine-Threonine Kinases
Proteins: PH, physiology
Pyrrolidines: PK, pharmacokinetics
Research Support, Non-U.S. Gov't
Thiocarbamates: PK, pharmacokinetics
*Thiocarbamates: PD, pharmacology
Tumor Cells, Cultured
Tumor Suppressor Protein p53: BI, biosynthesis
Tumor Suppressor Protein p53: CH, chemistry
Tumor Suppressor Protein p53: DE, drug effects
*Tumor Suppressor Protein p53: ME, metabolism
Tumor Suppressor Proteins

CAS REGISTRY NO.: 14708-99-7 (ferroin); 25769-03-3 (pyrrolidine dithiocarbamic acid); 616-91-1 (Acetylcysteine); ***73348-75-1 (bathocuproine sulfonate)***; 7440-50-8 (Copper); 7722-84-1 (Hydrogen Peroxide); 9007-49-2 (DNA)

CHEMICAL NAME: 0 (***Antioxidants***); 0 (CDKN1A protein, human); 0 (Cell Cycle Proteins); 0 (***Chelating*** Agents); 0 (Cyclin-Dependent Kinase Inhibitor p21); 0 (Cyclins); 0 (DNA-Binding Proteins); 0 (Intercalating Agents); 0 (Phenanthrolines); 0 (Proteins); 0 (Pyrrolidines); 0 (Thiocarbamates); 0 (Tumor Suppressor Protein p53); 0 (Tumor Suppressor Proteins); EC 2.7.1.37 (Protein-Serine-Threonine Kinases); EC 2.7.1.37 (***ataxia telangiectasia*** mutated protein)

L221 ANSWER 9 OF 24 MEDLINE on STN
ACCESSION NUMBER: 84002886 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6616960
TITLE: Abnormalities of lymphocyte locomotion in immunodeficiency disease.
AUTHOR: Van Epps D E; El-Naggar A; Ochs H D
CONTRACT NUMBER: AI-07073 (NIAID)
CA 20819 (NCI)
RR37 (NCRR)
SOURCE: Clinical and experimental immunology, (1983 Sep) Vol. 53, No. 3, pp. 678-88.
Journal code: 0057202. ISSN: 0009-9104.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 198311
ENTRY DATE: Entered STN: 19 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 23 Nov 1983

ABSTRACT:
Lymphocyte and neutrophil locomotion were studied in 23 patients with well defined, primary immunodeficiencies. These included eight patients with common variable immune deficiency, three patients with X-linked agammaglobulinaemia, two patients with the Wiskott-Aldrich syndrome, three patients with ***ataxia*** ***telangiectasia***, three patients with immunodeficiency and normal serum immunoglobulin concentrations, one patient with immune deficiency and hyper-IgM syndrome, two patients with Job syndrome and one patient with a granulocyte adherence defect. Random and stimulated lymphocyte and neutrophil migration were evaluated. C5a and casein were used to stimulate lymphocyte migration and C5a and formyl-methionyl-leucyl-phenylalanine (f-MLP) were used to stimulate neutrophil migration. Significantly depressed lymphocyte migration in response to casein and C5a was observed in patients with common variable immune deficiency, patients with immune deficiency and normal immunoglobulin concentration, and patients with Job syndrome. No consistent defect in lymphocyte locomotion was observed in the other patients studied. Neutrophil migration in response to C5a and f-MLP was depressed in Job syndrome, the patient with a granulocyte adherence defect, one of the six patients with common variable immune deficiency and none of the remaining patients. No significant correlation of skin test reactivity and lymphocyte migration was noted, but a correlation between the degree of lymphocyte proliferation in response to phytohaemagglutinin and lymphocyte migration in response to casein was observed. The results presented indicate that aberrations in lymphocyte migration occur in several types of immunodeficiency diseases and that defects in lymphocyte and neutrophil migration can occur simultaneously or totally independent of each other.

CONTROLLED TERM: Check Tags: Female; Male
Adolescent
Adult
Aged
Caseins
Chemotactic Factors
*Chemotaxis, Leukocyte
Child
Child, Preschool
Comparative Study
Complement C5
Complement C5a
Humans
Hypersensitivity, Delayed
*Immunologic Deficiency Syndromes: IM, immunology
Job's Syndrome: IM, immunology
Lymphocyte Activation
Lymphocytes: IM, immunology
Middle Aged
Mitosis
N-Formylmethionine Leucyl-Phenylalanine
Neutrophils: IM, immunology
Phytohemagglutinins: PD, pharmacology
Receptors, Antigen, B-Cell: AN, analysis
Research Support, Non-U.S. Gov't
Research Support, U.S. Gov't, P.H.S.

CAS REGISTRY NO.: 59880-97-6 (N-Formylmethionine Leucyl-Phenylalanine); 80295-54-1 (Complement C5a)

CHEMICAL NAME: 0 (Caseins); 0 (Chemotactic Factors); 0 (Complement C5); 0

(Phytohemagglutinins); 0 (Receptors, Antigen, B-Cell)

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ACCESSION NUMBER: 2006092279 EMBASE

TITLE: Silymarin and silibinin cause G1 and G2-M cell cycle arrest via distinct circuitries in human prostate cancer PC3 cells: A comparison of flavanone silibinin with flavanolignan mixture silymarin.

AUTHOR: Deep G.; Singh R.P.; Agarwal C.; Kroll D.J.; Agarwal R.

CORPORATE SOURCE: Prof. R. Agarwal, Department of Pharmaceutical Sciences, School of Pharmacy, University of Colorado Health Sciences Center, 4200 East Ninth Avenue, Denver, CO 80262, United States. Rajesh.Agarwal@UCHSC.edu

SOURCE: Oncogene, (16 Feb 2006) Vol. 25, No. 7, pp. 1053-1069. .
Refs: 85
ISSN: 0950-9232 E-ISSN: 1476-5594 CODEN: ONCNES

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 016 Cancer
028 Urology and Nephrology
030 Pharmacology
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 16 Mar 2006
Last Updated on STN: 16 Mar 2006

ABSTRACT: Here, we assessed and compared the anticancer efficacy and associated mechanisms of silymarin and silibinin in human prostate cancer (PCA) PC3 cells; silymarin is comprised of silibinin and its other stereoisomers, including isosilybin A, isosilybin B, silydianin, silychristin and isosilychristin. Silymarin and silibinin (50-100 μg/ml) inhibited cell proliferation, induced cell death, and caused G1 and G2-M cell cycle arrest in a dose/time-dependent manner. Molecular studies showed that G1 arrest was associated with a decrease in cyclin D1, cyclin D3, cyclin E, cyclin-dependent kinase (CDK)4, CDK6 and CDK2 protein levels, and CDK2 and CDK4 kinase activity, together with an increase in CDK inhibitors (CDKIs) Kip1/p27 and Cip1/p21. Further, both agents caused cytoplasmic sequestration of cyclin D1 and CDK2, contributing to G1 arrest. The G2-M arrest by silibinin and silymarin was associated with decreased levels of cyclin B1, cyclin A, pCdc2 (Tyr15), Cdc2, and an inhibition of Cdc2 kinase activity. Both agents also decreased the levels of Cdc25B and cell division cycle 25C (Cdc25C) phosphatases with an increased phosphorylation of Cdc25C at Ser216 and its translocation from nucleus to the cytoplasm, which was accompanied by an increased binding with 14-3-3β. Both agents also increased checkpoint kinase (Chk)2 phosphorylation at Thr68 and Ser19 sites, which is known to phosphorylate Cdc25C at Ser216 site. Chk2-specific small interfering RNA largely attenuated the silymarin and silibinin-induced G2-M arrest. An increase in the phosphorylation of histone 2AX and ***ataxia telangiectasia*** mutated was also observed. These findings indicate that silymarin and silibinin modulate G1 phase cyclins-CDKs-CDKIs for G1 arrest, and the Chk2-Cdc25C-Cdc2/cyclin B1 pathway for G2-M arrest, together with an altered subcellular localization of critical cell cycle regulators. Overall, we observed comparable effects for both silymarin and silibinin at equal concentrations by weight, suggesting that silibinin could be a major cell cycle-inhibitory component in silymarin. However, other silibinin stereoisomers present in silymarin also contribute to its efficacy, and could be of interest for future investigation. .COPYRGT. 2006 Nature Publishing Group All rights reserved.

CONTROLLED TERM: Medical Descriptors:
*cell cycle arrest
*antineoplastic activity
*prostate cancer
cell cycle G1 phase
cell cycle G2 phase
cell cycle M phase
cancer cell culture
comparative study
drug mechanism
drug efficacy
stereoisomerism
concentration response
cell proliferation
cell death
molecular biology
protein content
protein determination
enzyme activity
cytoplasm
protein localization
cellular distribution
enzyme inhibition
quantitative analysis
enzyme phosphorylation
intracellular transport
cell nucleus
protein transport
protein protein interaction
cell cycle regulation
drug effect
drug potency
human
male
controlled study
human cell
article
priority journal

CONTROLLED TERM: Drug Descriptors:
silibinin: CM, drug comparison
silibinin: DV, drug development
silibinin: PD, pharmacology
*silylmarin: CM, drug comparison
*silylmarin: DV, drug development
*silylmarin: PD, pharmacology
flavanoid: CM, drug comparison
flavanoid: DV, drug development
flavanoid: PD, pharmacology
*lignan derivative: CM, drug comparison
*lignan derivative: DV, drug development
*lignan derivative: PD, pharmacology
isosilybin A
isosilybin B
silidianin
silicristin
isosilychristin
cyclin D1: EC, endogenous compound
cyclin D3: EC, endogenous compound
cyclin E: EC, endogenous compound
cyclin dependent kinase 4: EC, endogenous compound

cyclin dependent kinase 6: EC, endogenous compound
cyclin dependent kinase 2: EC, endogenous compound
cyclin dependent kinase inhibitor 1B: EC, endogenous compound
cyclin dependent kinase inhibitor 1: EC, endogenous compound
cyclin B1: EC, endogenous compound
cyclin A: EC, endogenous compound
cell cycle protein: EC, endogenous compound
cyclin dependent kinase 1: EC, endogenous compound
phosphatase: EC, endogenous compound
protein 14 3 3: EC, endogenous compound
checkpoint kinase 2: EC, endogenous compound
small interfering RNA
histone H2AX: EC, endogenous compound
ATM protein: EC, endogenous compound
unclassified drug

CAS REGISTRY NO.: (silibinin) 22888-70-6; (silidianin) 29782-68-1; (silicristin) 33889-69-9; (cyclin dependent kinase 4) 147014-97-9; (cyclin dependent kinase 2) 141349-86-2; (phosphatase) 9013-05-2; (protein 14 3 3) 136047-16-0; (checkpoint kinase 2) 244634-79-5

COMPANY NAME: Sigma Aldrich (United States)

L221 ANSWER 11 OF 24 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2005206506 EMBASE

TITLE: Farnesyltransferase inhibitors induce DNA damage via reactive oxygen species in human cancer cells.

AUTHOR: Pan J.; She M.; Xu Z.-X.; Sun L.; Yeung S.-C.J.

CORPORATE SOURCE: S.-C.J. Yeung, Dept. of Endocr. Neoplasia/Horm. D., Univ. Texas M.D. Anderson Cancer C., 1515 Holcombe Boulevard, Houston, TX 77030, United States. syeung@mdanderson.org

SOURCE: Cancer Research, (1 May 2005) Vol. 65, No. 9, pp. 3671-3681. .
Refs: 51
ISSN: 0008-5472 CODEN: CNREA8

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 016 Cancer
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 2 Jun 2005
Last Updated on STN: 2 Jun 2005

ABSTRACT: Farnesyltransferase inhibitors (FTIs) possess antitumor activity. Based on recent findings, we hypothesized that FTIs induce reactive oxygen species (ROS) that damage DNA, leading to DNA damage responses. To test this hypothesis, we investigated the effects of FTIs on the generation of ROS, DNA double-strand breaks (DSB), DNA damage responses, and RhoB, and the effects of quenching ROS on these FTI effects. We evaluated four FTIs in human cancer cell lines of different tissue origins. We found that FTIs induced ROS and DSBs. Suppressing expression of the β-subunit of farnesyltransferase with siRNA did not induce ROS, but slightly attenuated the ROS induced by FTIs. N-acetyl-L-cysteine (NAC), but not caspase inhibitors, blocked FTI-induced DSBs, suggesting that the DSBs were caused by ROS and did not result from apoptosis. The DSBs led to DNA damage responses. H2AX became phosphorylated and formed nuclear foci. The DNA-damage-sensing molecules involved were probably ***ataxia-telangiectasia*** mutated protein (ATM) and DNA-dependent protein kinase (DNA-PK) but not ATM- and Rad3-related protein

(ATR). Key components of the homologous recombination and nonhomologous end joining repair pathways (DNA-PK, BRCA1, and NBS1) underwent phosphorylation and formed nuclear foci. RhoB, a mediator of the antineoplastic effect of FTIs and a protein inducible by DNA damage, was increased by FTIs. This increase was blocked by NAC. We concluded that FTIs induced oxidative DNA damage by inducing ROS and initiated DNA damage responses, including RhoB induction, and there was a complex relationship among FTIs, farnesyltransferase, ROS, and RhoB. Our data also imply that inhibitors of DNA repair may accentuate the clinical efficacy of FTIs.

CONTROLLED TERM: Medical Descriptors:
*DNA damage
*cancer cell
oxidative stress
DNA strand breakage
evaluation
homologous recombination
antineoplastic activity
protein induction
ataxia telangiectasia
human
controlled study
human cell
article
priority journal
Drug Descriptors:
*protein farnesyltransferase inhibitor: PD, pharmacology
*DNA: EC, endogenous compound
*reactive oxygen metabolite: EC, endogenous compound
manumycin: PD, pharmacology
wortmannin: PD, pharmacology
caffeine: PD, pharmacology
doxycycline: PD, pharmacology
2 [[2 [[2 [(2 amino 3 mercaptopropyl)amino] 3 methylpentyl]oxy] 1 oxo 3 phenylpropyl]amino] 4 (methylsulfonyl)butanoic acid isopropyl ester: PD, pharmacology
n [[5 [(2 amino 3 mercaptopropyl)amino][1,1' biphenyl] 2 yl]carbonyl]methionine: PD, pharmacology
acetylcysteine: PD, pharmacology
deferoxamine: PD, pharmacology
ATM protein: EC, endogenous compound
DNA dependent protein kinase: EC, endogenous compound
checkpoint kinase Rad3: EC, endogenous compound
BRCA1 protein: EC, endogenous compound
protein nbs1: EC, endogenous compound
RhoB guanine nucleotide binding protein: EC, endogenous compound
unclassified drug

CAS REGISTRY NO.: (DNA) 9007-49-2; (manumycin) 52665-74-4; (wortmannin) 19545-26-7; (caffeine) 30388-07-9, 58-08-2; (doxycycline) 10592-13-9, 17086-28-1, 564-25-0; (2 [[2 [[2 [(2 amino 3 mercaptopropyl)amino] 3 methylpentyl]oxy] 1 oxo 3 phenylpropyl]amino] 4 (methylsulfonyl)butanoic acid isopropyl ester) 160141-09-3; (n [[5 [(2 amino 3 mercaptopropyl)amino][1,1' biphenyl] 2 yl]carbonyl]methionine) 170006-72-1; (acetylcysteine) 616-91-1; (***deferoxamine***) ***70-51-9***

CHEMICAL NAME: L 744832; Fti 276

L221 ANSWER 12 OF 24 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2005396236 EMBASE

TITLE: The DNA damage pathway regulates innate immune system ligands of the NKG2D receptor.

AUTHOR: Gasser S.; Orsulic S.; Brown E.J.; Raulet D.H.

CORPORATE SOURCE: D.H. Raulet, Department of Molecular and Cell Biology, Cancer Research Laboratory, University of California, Berkeley, CA 94720-3200, United States. raulet@uclink.berkeley.edu

SOURCE: Nature, (25 Aug 2005) Vol. 436, No. 7054, pp. 1186-1190. . Refs: 27
ISSN: 0028-0836 CODEN: NATUAS

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 026 Immunology, Serology and Transplantation
029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 29 Sep 2005
Last Updated on STN: 29 Sep 2005

ABSTRACT: Some stimulatory receptors of the innate immune system, such as the NKG2D receptor (also called KLRK1) expressed by natural killer cells and activated CD8(+)T cells, recognize self-molecules that are upregulated in diseased cells by poorly understood mechanisms. Here we show that mouse and human NKG2D ligands are upregulated in non-tumour cell lines by genotoxic stress and stalled DNA replication, conditions known to activate a major DNA damage checkpoint pathway initiated by ATM (***ataxia ***telangiectasia*** , mutated) or ATR (ATM- and Rad3-related) protein kinases. Ligand upregulation was prevented by pharmacological or genetic inhibition of ATR, ATM or Chk1 (a downstream transducer kinase in the pathway). Furthermore, constitutive ligand expression by a tumour cell line was inhibited by targeting short interfering RNA to ATM, suggesting that ligand expression in established tumour cells, which often harbour genomic irregularities, may be due to chronic activation of the DNA damage response pathway. Thus, the DNA damage response, previously shown to arrest the cell cycle and enhance DNA repair functions, or to trigger apoptosis, may also participate in alerting the immune system to the presence of potentially dangerous cells.

CONTROLLED TERM: Medical Descriptors:
*DNA damage
*immune system
immunoregulation
regulatory mechanism
natural killer cell
gene expression
T lymphocyte activation
genotoxicity
stress
DNA replication
enzyme inhibition
tumor cell line
gene targeting
mitosis inhibition
DNA repair
apoptosis
nonhuman
mouse
controlled study
animal cell

article
priority journal
Drug Descriptors:
*natural killer cell receptor NKG2D: EC, endogenous compound
ligand
CD8 antigen: EC, endogenous compound
ATM protein
ATR protein
protein kinase
checkpoint kinase 1
small interfering RNA
CAS REGISTRY NO.: (protein kinase) 9026-43-1

L221 ANSWER 13 OF 24 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2005357623 EMBASE
TITLE: ATM Polymorphism and hereditary nonpolyposis colorectal cancer (HNPCC) age of onset (United States).
AUTHOR: Jones J.S.; Gu X.; Lynch P.M.; Rodriguez-Bigas M.; Amos C.I.; Frazier M.L.
CORPORATE SOURCE: Dr. M.L. Frazier, Department of Epidemiology, University of Texas, M.D. Anderson Cancer Center, 1515 Holcombe Boulevard, Houston, TX 77030, United States. mlfrazier@mdanderson.org
SOURCE: Cancer Causes and Control, (2005) Vol. 16, No. 6, pp. 749-753. .
Refs: 16
ISSN: 0957-5243 CODEN: CCCNEN
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
022 Human Genetics
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 9 Sep 2005
Last Updated on STN: 9 Sep 2005

ABSTRACT: Objective: We examined a G-to-A single nucleotide polymorphism of the ATM gene, to determine if it influences hereditary non-polyposis colorectal cancer (HNPCC) age of onset. HNPCC is caused by mutations in mismatch repair genes, especially hMLH1 and hMSH2. ATM germline mutations have been associated with breast and digestive cancers. In a smaller European study, the G-to-A polymorphism was associated with an increased risk of developing an HNPCC-related cancer within HNPCC families. Materials and methods: We genotyped 109 mismatch repair gene (MMR) mutation carriers from 53 HNPCC families for the ATM polymorphism using PCR and single strand conformational polymorphism (SSCP) analysis. We tested the association between the ATM genotypes and HNPCC age of onset by survival analysis. Results: The ATM polymorphism did not significantly modify HNPCC age of onset, nor overall risk, in our population. Conclusions: Although a modifier effect was not seen in our study, future studies that examine the polymorphism in combination with other genetic and environmental factors may elucidate an association. Revealing such associations in MMR mutation carriers may improve risk estimates and help to identify individuals who are genetically susceptible to developing HNPCC at an earlier age. .COPYRGT. Springer 2005.

CONTROLLED TERM: Medical Descriptors:
*genetic polymorphism
*colorectal cancer

onset age
United States
genotype
mismatch repair
gene mutation
family history
polymerase chain reaction
single strand conformation polymorphism
cancer survival
statistical significance
cancer risk
statistical model
genotype environment interaction
risk assessment
genetic susceptibility
ataxia telangiectasia
human
male
female
major clinical study
controlled study
aged
adult
article
priority journal
Drug Descriptors:
borinic acid derivative
edetic acid
CAS REGISTRY NO.: (***edetic acid***) 150-43-6, ***60-00-4***

L221 ANSWER 14 OF 24 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2004397797 EMBASE
TITLE: The genetics of hypogammaglobulinemia.
AUTHOR: Grimbacher B.; Schaffer A.A.; Peter H.-H.
CORPORATE SOURCE: Dr. B. Grimbacher, Div. of Rheumatol./Clin. Immunology, Medical School, University of Freiburg, Hugstetterstrasse 55, 79106 Freiburg, Germany. grimbacher@medizin.ukl.uni-freiburg.de
SOURCE: Current Allergy and Asthma Reports, (2004) Vol. 4, No. 5, pp. 349-358. .
Refs: 90
ISSN: 1529-7322 CODEN: CAARC
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
022 Human Genetics
026 Immunology, Serology and Transplantation
037 Drug Literature Index
038 Adverse Reactions Titles
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 30 Sep 2004
Last Updated on STN: 30 Sep 2004
ABSTRACT: Etiologies for human hypogammaglobulinemias are diverse and include genetic and nongenetic causes. Although recent reviews focus on the complex genetics of common variable immunodeficiency, in this review, we survey different causes of hypogammaglobulinemias and discuss possible mechanisms.

CONTROLLED TERM: Medical Descriptors:
*molecular genetics
*hypogammaglobulinemia: DT, drug therapy
*hypogammaglobulinemia: ET, etiology
*hypogammaglobulinemia: SI, side effect
genetic susceptibility
disease classification
humoral immune deficiency: DT, drug therapy
humoral immune deficiency: ET, etiology
humoral immune deficiency: SI, side effect
common variable immunodeficiency: ET, etiology
immunoglobulin G deficiency: DT, drug therapy
immunoglobulin G deficiency: ET, etiology
immunoglobulin G deficiency: SI, side effect
immunoglobulin A deficiency: ET, etiology
immunoglobulin A deficiency: SI, side effect
infant disease: ET, etiology
linkage analysis
Wiskott Aldrich syndrome: DT, drug therapy
ataxia telangiectasia: DT, drug therapy
DiGeorge syndrome: DT, drug therapy
human
review
Drug Descriptors:
immunoglobulin G: EC, endogenous compound
immunoglobulin A: EC, endogenous compound
cytotoxic agent: AE, adverse drug reaction
B lymphocyte antibody: AE, adverse drug reaction
gold: AE, adverse drug reaction
corticosteroid: AE, adverse drug reaction
salazosulfapyridine: AE, adverse drug reaction
chloroquine: AE, adverse drug reaction
penicillamine: AE, adverse drug reaction
hydantoin: AE, adverse drug reaction
carbamazepine: AE, adverse drug reaction
zonisamide: AE, adverse drug reaction
valproic acid: AE, adverse drug reaction
captopril: AE, adverse drug reaction
fenclofenac: AE, adverse drug reaction
polysaccharide vaccine: DT, drug therapy

CAS REGISTRY NO.: (immunoglobulin G) 97794-27-9; (gold) 7440-57-5; (salazosulfapyridine) 599-79-1; (chloroquine) 132-73-0, 3545-67-3, 50-63-5, 54-05-7; (***penicillamine***) 2219-30-9, ***52-67-5***; (hydantoin) 461-72-3; (carbamazepine) 298-46-4, 8047-84-5; (zonisamide) 68291-97-4; (valproic acid) 1069-66-5, 99-66-1; (captopril) 62571-86-2; (fenclofenac) 34645-84-6

L221 ANSWER 15 OF 24 EMBASE

ACCESSION NUMBER: 81251649 EMBASE
DOCUMENT NUMBER: 1981251649
TITLE: The ***ataxia telangiectasia*** clastogenic factor is a low molecular weight peptide.
AUTHOR: Shaham M.; Becker Y.
CORPORATE SOURCE: Dept. Hum. Genet. Molec. Virol., Hadassah-Hebrew Univ. Med. Cent., Jerusalem, Israel
SOURCE: Human Genetics, (1981) Vol. 58, No. 4, pp. 422-424. .
CODEN: HUGEDQ
COUNTRY: Germany

DOCUMENT TYPE: Journal
FILE SEGMENT: 022 Human Genetics
008 Neurology and Neurosurgery
037 Drug Literature Index
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Dec 1991
Last Updated on STN: 9 Dec 1991

ABSTRACT: The clastogenic factor in the plasma of ***ataxia*** ***telangiectasia*** (AT) patients and in conditioned medium from AT skin fibroblast cultures is a peptide with a molecular weight in the range of 500 to 1000. No clastogenic activity could be demonstrated in extracts of cultured AT fibroblasts.

CONTROLLED TERM: Medical Descriptors:
ataxia telangiectasia
*chromosome breakage
*clastogenesis
*fibroblast
cell culture
fibroblast culture
molecular weight
peptide analysis
serum
in vitro study
Drug Descriptors:
*peptide
*phytohemagglutinin
edetic acid
trypsin
CAS REGISTRY NO.: (phytohemagglutinin) 9008-97-3; (***edetic acid***) 150-43-6, ***60-00-4***; (trypsin) 9002-07-7
COMPANY NAME: Wellcome103 (United Kingdom); 101; 111; 912; 923; 924

L221 ANSWER 16 OF 24 EMBASE
ACCESSION NUMBER: 81125089 EMBASE
DOCUMENT NUMBER: 1981125089
TITLE: Effect of the flavonoid (+) cyanidanol-3 on procollagen biosynthesis and transport in normal and ***ataxia telangiectasia*** cultured skin fibroblasts.
AUTHOR: Becker Y.; Stevely W.; Hamburger Y.; et al.
CORPORATE SOURCE: Dept. Molec. Virol., Hebrew Univ. Hadassah Med. Sch., Jerusalem, Israel
SOURCE: Connective Tissue Research, (1981) Vol. 8, No. 2, pp. 77-84. .
CODEN: CVTRBC
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 029 Clinical Biochemistry
022 Human Genetics
008 Neurology and Neurosurgery
037 Drug Literature Index
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Dec 1991
Last Updated on STN: 9 Dec 1991

ABSTRACT: The synthesis and secretion of procollagen into the medium of cultures of human skin fibroblasts from normal individuals and from patients with the genetic disorder, ***ataxia telangiectasia***, are markedly inhibited by the flavonoid (+)cyanidanol-3. Those proteins which were

secreted into the medium in the presence of cyanidanol were resistant to collagenase treatment (noncollagenous proteins). Polyacrylamide gel electrophoresis revealed the presence of only one noncollagenous protein of 66,000 daltons in the medium of cyanidanol-treated cells as compared with the nine other polypeptides found in the medium of untreated cells.

CONTROLLED TERM: Medical Descriptors:
ataxia telangiectasia
*fibroblast
cell culture
cysteine s 35
fibroblast culture
skin
central nervous system
in vitro study
human cell
peripheral vascular system
reticuloendothelial system
heredity
major clinical study
Drug Descriptors:
*2,2' bipyridine
*aminoacetonitrile
*3 aminopropionitrile
catechin
penicillamine
*procollagen
radioisotope

CAS REGISTRY NO.: (2,2' bipyridine) 366-18-7; (aminoacetonitrile) 151-63-3, 540-61-4; (3 aminopropionitrile) 151-18-8; (catechin) 13392-26-2, 154-23-4; (***penicillamine***) 2219-30-9, ***52-67-5***

COMPANY NAME: Zyma (Switzerland); Aldrich (United States)

L221 ANSWER 17 OF 24 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:182247 BIOSIS
DOCUMENT NUMBER: PREV200600184359
TITLE: CML progenitor cells have chromsomal instability and display increased DNA damage at DNA fragile sites.
AUTHOR(S): Dierov, Jamil K. [Reprint Author]; Schoppy, David W.; Carroll, Martin
CORPORATE SOURCE: Univ Penn, Philadelphia, PA 19104 USA
SOURCE: Blood, (NOV 16 2005) Vol. 106, No. 11, Part 1, pp. 563A. Meeting Info.: 47th Annual Meeting of the American-Society-of-Hematology. Atlanta, GA, USA. December 10 -13, 2005. Amer Soc Hematol.
CODEN: BLOOAW. ISSN: 0006-4971.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 15 Mar 2006
Last Updated on STN: 15 Mar 2006

ABSTRACT:Chronic myelogeneous leukemia (CML) is a two stage disease which progresses to blast crisis over a period of 3-5 years in untreated patients. The BCR/ABL oncogene induces the hyperproliferation associated with chronic phase CML but whether BCR/ABL induces chromosomal instability leading to blast crisis has been controversial. We have previously demonstrated that BCR/ABL delays the repair of DNA double strand breaks and increases chromosomal instability in a murine cell line. Furthermore, we have demonstrated in cell

lines that ***BCP***/ABL disrupts the function of the DNA damage sensing protein, ***ataxia telangiectasia*** and rad 3 related (ATR).
One of the functions of ATR is to maintain the stability of DNA fragile sites, late replicating sites in the chromosome that are frequently involved in translocations. To determine if BCR/ABL affects the stability of DNA fragile sites in Bat F3 cells that do or do not express BCR/ABL, cells were incubated in low dose aphidicolin for 24 hours to induce fragile site breakage. BCR/ABL expressing cells, but not control cells, demonstrated fragile site damage consistent with a disruption of ATR function in BCR/ABL expressing cells. In order to determine if primary patient cells display a genomic instability phenotype, we have analyzed the response to DNA damage in CD34+ cells from normal volunteers and from CIVIL patients seen at the University of Pennsylvania Cancer Center. We first examined the DNA repair response by treating cells for two hours with etoposide. Both normal cells and CML progenitor cells demonstrate DNA double strand breaks as measured by the comet assay, a quantitative assay for DNA double strand breaks. However, in Ph+ cells from the patient sample there was a delay in the repair of DNA double strand breaks as indicated by a significant increase in the olive tail moment at 2 hours and 24 hours after treatment with etoposide. In addition, we analyzed the effect of a two hour exposure to etoposide on chromosome stability as measured by spectral karyotyping (SKY). Normal CD34+ cells and CD34+ cells from patients were treated with etoposide and then allowed to recover for 48 hours before analysis of metaphase spreads. Normal cells demonstrated no spontaneous DNA damage and, after etoposide treatment and repair, demonstrated only modest levels of DNA damage (2 translocations and 5 numerical alterations per 14 metaphases analyzed). In contrast, Ph+ cells demonstrated spontaneous DNA damage in these cell conditions. Furthermore, after etoposide treatment Ph+ cells demonstrated high levels of DNA damage with 9 translocations and 12 numerical alterations in 13 metaphases. These results suggest that Ph+ progenitor cells from patients with CML demonstrate chromosomal instability and suggest a mechanism for progression from CML chronic phase to blast crisis. Full analysis of additional patient samples will be presented. Taken together, we propose that BCR/ABL disrupts ATR function in cell lines and primary cells leading to an increase in chromosomal instability that leads to CML blast crisis.

CONCEPT CODE:
General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Cytology - Human 02508
Genetics - General 03502
Genetics - Animal 03506
Genetics - Human 03508
Biochemistry studies - General 10060
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Pathology - Therapy 12512
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Blood - Blood, lymphatic and reticuloendothelial pathologies 15006
Pharmacology - Clinical pharmacology 22005
Pharmacology - Blood and hematopoietic agents 22008
Neoplasms - Immunology 24003
Neoplasms - Pathology, clinical aspects and systemic effects 24004
Neoplasms - Therapeutic agents and therapy 24008
Neoplasms - Blood and reticuloendothelial neoplasms 24010
Immunology - General and methods 34502
Immunology - Immunopathology, tissue immunology 34508

INDEX TERMS: Major Concepts

Molecular Genetics (Biochemistry and Molecular Biophysics); Oncology (Human Medicine, Medical Sciences); Hematology (Human Medicine, Medical Sciences)

INDEX TERMS: Parts, Structures, & Systems of Organisms
progenitor cell: blood and lymphatics; CD34-positive cell: immune system, blood and lymphatics; chromosome

INDEX TERMS: Diseases
chronic myelogeneous leukemia: neoplastic disease, blood and lymphatic disease, drug therapy, CML

INDEX TERMS: Chemicals & Biochemicals
DNA; etoposide: antineoplastic-drug, hematologic-drug

INDEX TERMS: Methods & Equipment
spectral karyotyping: laboratory techniques, genetic techniques

ORGANISM: Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human (common)
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ORGANISM: Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Ba/F3 cell line (cell_line): murine pro-B cell
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

REGISTRY NUMBER: 33419-42-0 (etoposide)

GENE NAME: human BCR/ABL gene (Hominidae)

L221 ANSWER 18 OF 24 USPATFULL on STN

ACCESSION NUMBER: 2006:9627 USPATFULL

TITLE: Shiga toxin B-subunit as a vector for tumor diagnosis and drug delivery to Gb3 expressing tumors

INVENTOR(S): Johannes, Ludger, Courbevoie, FRANCE
Grierson, David, Versailles, FRANCE
Robine, Sylvie, Vanves, FRANCE
Florent, Jean-Claude, Gif-Sur-Yvette, FRANCE
Maillard, Philipe, Saint-Cyr-L'Ecole, FRANCE
Roger, Jacky, Villecresnes, FRANCE

PATENT ASSIGNEE(S): INSTITUT CURIE, Paris Cedex 05, FRANCE (non-U.S. corporation)
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, Paris Cedex, FRANCE (non-U.S. corporation)
INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE, Paris Cedex 13, FRANCE (non-U.S. corporation)
UNIVERSITE PIERRE ET MARIE CURIE (PARIS VI), Paris, FRANCE (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006008475	A1	20060112

APPLICATION INFO.: US 2005-46786 A1 20050201 (11)
RELATED APPLN. INFO.: Continuation of Ser. No. WO 2003-EP9308, filed on 31 Jul 2003, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	EP 2002-291962	20020802

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BIRCH STEWART KOLASCH & BIRCH, PO BOX 747, FALLS CHURCH, VA, 22040-0747, US
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 16 Drawing Page(s)
LINE COUNT: 1412
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to new compounds for cancer therapy or diagnosis and to the use of a non-toxic B subunit of Shiga toxin mutant as a vector for diagnostic products or drugs in over-expressing Gb3 receptor cells, such compounds having the following formula: STxB-Z(n)-Cys-Y(m)-T wherein--STxB is the Shiga Toxin B subunit or a functional equivalent thereof, --Z(n) wherein n is 0 or 1, Z is an amino-acid residue devoid of sulfydryl groups, or is a polypeptide, --T is a molecule linked by a covalent bound to the S part of Cys, selected from: agents for in vivo diagnosis, cytotoxic agents, prodrugs, or enzymes for the conversion of a prodrug to a drug, --Y(m) wherein m is 0 or 1, Y is a linker between T and Cys, which is either cleavable or not cleavable for the release of T after the internalization of the hybrid compound into cells.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

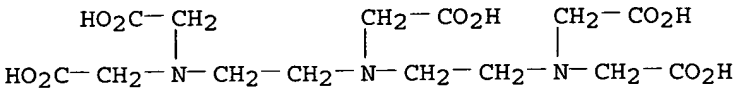
DETD Babilon, R. W., K. J. Soprano, and E. E. Henderson. 1985. Hypersensitivity and reduced inhibition of DNA synthesis in ***ataxia telangiectasia*** lymphoblasts treated with low levels of neocarzinostatin. Mutat. Res. 146:79-87.

DETD Shiloh, Y., E. Tabor, and Y. Becker. 1982. Cellular hypersensitivity to neocarzinostatin in ***ataxia-telangiectasia*** skin fibroblasts. Cancer Res. 42:2247-2249.

IT ***67-43-6D***, Diethylenetriaminepentaacetic acid, complex with gadolinium and ethoxybenzyl 7440-54-2D, Gadolinium, complex with acetic acid derivs. 7440-54-2D, Gadolinium, polymer complexes 83678-67-5, Gd-DoTA 651740-21-5
(Shiga toxin B-subunit as a vector for tumor diagnosis and drug delivery to Gb3-expressing tumors)

IT ***67-43-6D***, Diethylenetriaminepentaacetic acid, complex with gadolinium and ethoxybenzyl
(Shiga toxin B-subunit as a vector for tumor diagnosis and drug delivery to Gb3-expressing tumors)

RN 67-43-6 USPATFULL
CN Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]- (7CI, 8CI, 9CI) (CA INDEX NAME)



L221 ANSWER 19 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2005:292956 USPATFULL

TITLE: Method for determination and quantification of radiation or genotoxin exposure
INVENTOR(S): D'Andrea, Alan D., Winchester, MA, UNITED STATES
PATENT ASSIGNEE(S): Dana Farber Cancer Center (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005255502	A1	20051117
APPLICATION INFO.:	US 2005-46346	A1	20050128 (11)

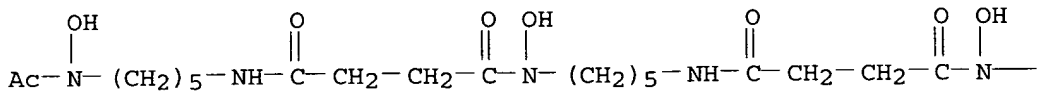
	NUMBER	DATE
PRIORITY INFORMATION:	US 2004-540380P	20040130 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: PALMER & DODGE, LLP, KATHLEEN M. WILLIAMS, 111 HUNTINGTON AVENUE, BOSTON, MA, 02199, US
NUMBER OF CLAIMS: 68
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 14 Drawing Page(s)
LINE COUNT: 2700
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention discloses methods for detecting exposure of a living subject to genotoxic agents, testing sensitivity to a genotoxic agent, and determining DNA damage caused by exposure to an agent, comprising detecting the presence of FANCD2-containing foci from a sample collected from said subject. The presence of concentrated foci is indicative of DNA damage, and the degree of foci formation is correlated with degree of exposure. Diagnostic reagents contain a ligand that binds to human FANCD2 associated with a detectable label. Kits for detecting DNA damage in a biological sample contain such diagnostic reagents and signal detection components. The invention further discloses methods for identifying agents which modulate the ability of FANCD2-containing foci to form. Among other things, such agents are potentially useful chemosensitizing agents or may confer protection against damage caused by genotoxic agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
DETD . . . Kim, S. T., Lane, W. S., Kastan, M. B., and D'Andrea, A. D. (2002). Convergence of the Fanconi anemia and ***ataxia telangiectasia*** signaling pathways. Cell 109, 459-472.
Wu, X., Petrini, J. H., Heine, W. F., Weaver, D. T., Livingston, D. M.,. . .
IT ***70-51-9***, Desferrioxamine
(FA/BRCA pathway agonist; antibodies to monoubiquitinated FANCD2 protein and method for determination and quantification of radiation or genotoxin exposure)
IT ***70-51-9***, Desferrioxamine
(FA/BRCA pathway agonist; antibodies to monoubiquitinated FANCD2 protein and method for determination and quantification of radiation or genotoxin exposure)
RN 70-51-9 USPATFULL
CN Butanediamide, N'-[5-[[4-[[5-(acetylhydroxyamino)pentyl]amino]-1,4-dioxobutyl]hydroxyamino]pentyl]-N-(5-aminopentyl)-N-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



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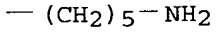


L221 ANSWER 20 OF 24 USPATFULL on STN
ACCESSION NUMBER: 2005:286471 USPATFULL
TITLE: Methods of treating ankylosing spondylitis using anti-TNF antibodies and peptides of human tumor necrosis factor
INVENTOR(S): Le, Junming, Forest Hills, NY, UNITED STATES
Vilcek, Jan T., Manhattan, NY, UNITED STATES
Daddona, Peter E., Menlo Park, CA, UNITED STATES
Ghrayeb, John, Downingtown, PA, UNITED STATES
Knight, David M., Berwyn, PA, UNITED STATES
Siegel, Scott A., Ringoes, NJ, UNITED STATES
Shealy, David J., Downingtown, PA, UNITED STATES
PATENT ASSIGNEE(S): Centocor, Inc., Malvern, PA, UNITED STATES (U.S. corporation)
New York University, New York, NY, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005249735	A1	20051110
APPLICATION INFO.:	US 2004-10954	A1	20041213 (11)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2003-637759, filed on 8 Aug 2003, PENDING Continuation-in-part of Ser. No. US 2001-927703, filed on 10 Aug 2001, PENDING Continuation of Ser. No. US 2001-756398, filed on 8 Jan 2001, GRANTED, Pat. No. US 6835823 Continuation-in-part of Ser. No. US 2001-920137, filed on 1 Aug 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-223360P	20000807 (60)
	US 2000-236826P	20000929 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133, US
NUMBER OF CLAIMS: 34
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 37 Drawing Page(s)
LINE COUNT: 7263
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Anti-TNF antibodies, fragments and regions thereof which are specific

for human tumor necrosis factor-α (TNFα) and are useful in vivo diagnosis and therapy of a number of TNFα-mediated pathologies and conditions, including ankylosing spondylitis, as well as polynucleotides coding for murine and chimeric antibodies, methods of producing the antibody, methods of use of the anti-TNF antibody, or fragment, region or derivative thereof, in immunoassays and immunotherapeutic approaches are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DETD . . . ataxia, Friedreich's ataxia, cerebellar cortical degenerations, multiple systems degenerations (Mencel, Dejerine-Thomas, Shi-Drager, and MachadoJoseph)); and systemic disorders (Refsum's disease, abetalipoprotemia, ***ataxia***, ***telangiectasia***, and mitochondrial multi-system disorder); demyelinating core disorders, such as multiple sclerosis, acute transverse myelitis; disorders of the motor unit, such. . .

DETD . . . spinal ataxia, Friedreich's ataxia, cerebellar cortical degenerations, multiple systems degenerations (Mencel, Dejerine-Thomas, Shi-Drager, and Machado-Joseph); systemic disorders (Refsum's disease, abetalipoprotemia, ***ataxia***, ***telangiectasia***, and mitochondrial multi.system disorder); demyelinating core disorders, such as multiple sclerosis, acute transverse myelitis; and disorders of the motor unit'. . .

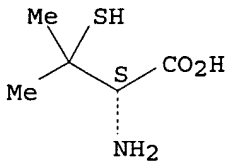
IT 50-07-7, Mitomycin C 50-78-2, Aspirin 51-43-4, Epinephrine 52-28-8, Codeine phosphate ***52-67-5***, Penicillamine 53-86-1, Indomethacin 54-05-7, Chloroquine 59-05-2, Methotrexate 89-57-6, Asacol 103-90-2, Paracetamol 118-42-3, Hydroxychloroquine 321-64-2, Tac rine 446-86-6, Azathioprine 469-62-5, Dextropropoxyphene 5003-48-5, Benorylate 9002-72-6, Growth hormone 11096-26-7, Erythropoietin 12244-57-4, Myocrisin 15307-86-5, Diclofenac 15687-27-1, Ibuprofen 16110-51-3, Cromolyn 22204-53-1, Naprosyn 23214-92-8, Doxorubicin 28109-92-4, Methylxanthine 34031-32-8, Auranofin 36330-85-5, Fenbufen 41340-25-4, Etodolac 120014-06-4, Donepezil 121181-53-1, Filgrastim 123774-72-1, Sargramostim 143831-71-4, Dornase alfa
(methods of treating ankylosing spondylitis using anti-tumor necrosis factor antibodies and peptides of human tumor necrosis factor)

IT ***52-67-5***, Penicillamine
(methods of treating ankylosing spondylitis using anti-tumor necrosis factor antibodies and peptides of human tumor necrosis factor)

RN 52-67-5 USPATFULL

CN D-Valine, 3-mercapto- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L221 ANSWER 21 OF 24 USPATFULL on STN

ACCESSION NUMBER: 2005:144174 USPATFULL

TITLE: COMPOSITIONS AND METHODS FOR TREATING CELLS HAVING DOUBLE MINUTE DNA

INVENTOR(S): WAHL, GEOFFREY M., SAN DIEGO, CA, UNITED STATES
SHIMIZU, NORIAKI, HIROSHIMA, JAPAN

KANDA, TERU, LA JOLLA, CA, UNITED STATES
SHEPARD, H. MICHAEL, RANCHO SANTA FE, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005123909	A1	20050609
	US 6946259	B2	20050920
APPLICATION INFO.:	US 1999-229229	A1	19990112 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-71146P	19980112 (60)
	US 1998-77644P	19980311 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MCDERMOTT, WILL & EMERY, 4370 LA JOLLA VILLAGE DRIVE, SUITE 700, SAN DIEGO, CA, 92122, US
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1-32
NUMBER OF DRAWINGS: 14 Drawing Page(s)
LINE COUNT: 1977

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides methods by which test substances can be screened for their ability to inhibit, enhance or eliminate double minute (DM) or extrachromosomal DNA by micronucleation in cells. This invention also provides a method for inducing maturation or death of a cell having the capacity to generate micronuclei. It also provides a method of treating a disease in a subject, the cells correlated with the disease having DM and extrachromosomal DNA as well as the capacity to generate micronuclei to capture them. Further provided is a method of detecting chromosomal and extrachromosomal DNA in a cell.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DETD . . . B. Vogelstein and A. J. Fonace. 1992. "A mammalian cell cycle checkpoint pathway utilizing p53 and GADD45 is defective in ***ataxia-telangiectasia***" Cell. 7:587-97.
Kuerbitz, S. J., B. S. Plunkett, W. V. Walsh and M. B. Kastan. 1992. "Wild-type p53 is. . .

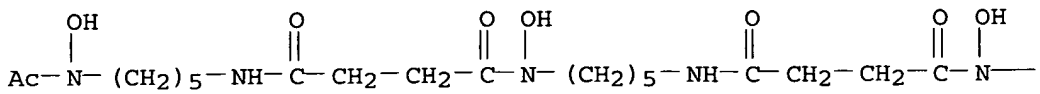
IT 67-68-5, DMSO, biological studies ***70-51-9***, Deferoxamine
91-64-5, Coumarin 98-92-0, Nicotinamide 1455-77-2, Guanazole
38966-21-1, Aphidicolin 51321-79-0, PALA
(compns. and methods for identifying therapeutic agents and for treating cells having double minute DNA)

IT ***70-51-9***, Deferoxamine
(compns. and methods for identifying therapeutic agents and for treating cells having double minute DNA)

RN 70-51-9 USPATFULL

CN Butanediamide, N'-[5-[[4-[[5-(acetylhydroxyamino)pentyl]amino]-1,4-dioxobutyl]hydroxyamino]pentyl]-N-(5-aminopentyl)-N-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A



$-(CH_2)_5-NH_2$

L221 ANSWER 22 OF 24 USPATFULL on STN

ACCESSION NUMBER:	2003:161945 USPATFULL
TITLE:	Diagnosis and management of infection caused by chlamydia
INVENTOR(S):	Mitchell, William M., Nashville, TN, United States Stratton, Charles W., Nashville, TN, United States
PATENT ASSIGNEE(S):	Vanderbilt University, Nashville, TN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6579854	B1	20030617
APPLICATION INFO.:	US 1998-73661		19980506 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1998-25174, filed on 18 Feb 1998 Continuation-in-part of Ser. No. US 1998-25521, filed on 18 Feb 1998, now abandoned Continuation-in-part of Ser. No. US 1998-25176, filed on 18 Feb 1998, now patented, Pat. No. US 6258532 Continuation-in-part of Ser. No. US 1997-911593, filed on 14 Aug 1997, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-45689P	19970506 (60)
	US 1997-45739P	19970506 (60)
	US 1997-45779P	19970506 (60)
	US 1997-45780P	19970506 (60)
	US 1997-45787P	19970506 (60)
	US 1996-23921P	19960814 (60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	GRANTED
PRIMARY EXAMINER:	Weddington, Kevin E.
LEGAL REPRESENTATIVE:	Clark & Elbing LLP
NUMBER OF CLAIMS:	9
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	6 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT:	4353

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a unique approach for the diagnosis and management of infections by Chlamydia species, particularly C. pneumoniae. The invention is based, in part, upon the discovery that a combination of agents directed toward the various stages of the chlamydial life cycle is effective in substantially reducing infection. Products comprising combination of antichlamydial agents, novel compositions and pharmaceutical packs are also described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DETD . . . Friedreich's ataxia, cerebellar cortical degenerations. multiple systems degenerations (Mencel, Dejerine-Thomas, Shi-Drager, and Machado Joseph)); and systemic disorders (Refsum's disease, abetalipoprotemia, ***ataxia***, ***telangiectasia***, and mitochondrial multi-system disorder); demyelinating core disorders, such

as multiple sclerosis, acute transverse myelitis; disorders of the motor unit, such. . .

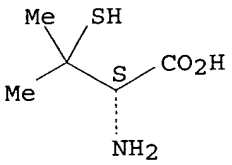
IT ***52-67-5***, Penicillamine 54-85-3, Isoniazide 55-22-1, Isonicotinic acid, biological studies 69-53-4, Ampicillin 443-48-1, Metronidazole 564-25-0, Doxycycline 6998-60-3, Rifamycin 8064-90-2, Bactrim 10118-90-8, Minocycline 13292-46-1, Rifampin 26787-78-0, Amoxicillin 36877-68-6, Nitroimidazole 81103-11-9, Clarithromycin 82419-36-1, Ofloxacin 83905-01-5, Azithromycin
(for Chlamydia infection treatment; diagnosis and management of infection caused by Chlamydia)

IT ***52-67-5***, Penicillamine
(for Chlamydia infection treatment; diagnosis and management of infection caused by Chlamydia)

RN 52-67-5 USPATFULL

CN D-Valine, 3-mercapto- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L221 ANSWER 23 OF 24 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER: 2004-449666 [42] WPIX

DOC. NO. CPI: C2004-168507

TITLE: Use of agent(s) that elevate intracellular cyclic adenosine monophosphate or intracellular calcium levels in neural tissue for modulating neurogenesis to treat central nervous system disorder.

DERWENT CLASS: B02 B03

INVENTOR(S): BERTILSSON, G; ERLANDSSON, R; FRISEN, J; HAEGESTRAND, A; HAGGBLAD, J; HEIDRICH, J; HELLSTROM, K; JANSSON, K; KORTESMAA, J; LINDQUIST, P; LUNDH, H; MCGUIRE, J; MERCER, A; NJBERG, K; OSSOINAK, A; PATRONE, C; RONNHOLM, H; WIKSTROM, L; ZACHRISSON, O; HAEGGBLAD, J; HELLSTROEM, K; ROENNHOLM, H; WIKSTROEM, L; HAEGERSTRAND, A; HELLSTROM, N; NYBERG, K; HELLSTROEM, N

PATENT ASSIGNEE(S): (BERT-I) BERTILSSON G; (ERLA-I) ERLANDSSON R; (FRIS-I) FRISEN J; (HAEG-I) HAEGESTRAND A; (HAGG-I) HAGGBLAD J; (HEID-I) HEIDRICH J; (HELL-I) HELLSTROM K; (JANS-I) JANSSON K; (KORT-I) KORTESMAA J; (LIND-I) LINDQUIST P; (LUND-I) LUNDH H; (MCGU-I) MCGUIRE J; (MERC-I) MERCER A; (NEUR-N) NEURONOVA AB; (NJBE-I) NJBERG K; (OSSO-I) OSSOINAK A; (PATR-I) PATRONE C; (RONN-I) RONNHOLM H; (WIKS-I) WIKSTROM L; (ZACH-I) ZACHRISSON O; (HAEG-I) HAEGGBLAD J; (HELL-I) HELLSTROEM K; (ROEN-I) ROENNHOLM H; (WIKS-I) WIKSTROEM L

COUNTRY COUNT: 108

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC

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US 2005009742   A1 20050113 (200506)          A61K038-17
US 2005009847   A1 20050113 (200506)          A61K038-17
US 2005209142   A1 20050922 (200563)          A61K038-22
EP 1583541      A2 20051012 (200568)  EN      A61K031-675
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US 2006079448   A1 20060413 (200626)          A61K038-22
JP 2006514630   W  20060511 (200635)       70 A61K045-00
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APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004045592	A2	WO 2003-IB5311	20031120
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US 2005009742	A1 Provisional	US 2002-427912P	20021120
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US 2005009847	A1 Provisional	US 2002-427912P	20021120
		US 2003-718071	20031120
US 2005209142	A1 Provisional	US 2002-427912P	20021120
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EP 1583541	A2	EP 2003-772495	20031120
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	CIP of	US 2003-718071	20031120
	Div ex	US 2004-850055	20040519
		US 2005-288495	20051128
JP 2006514630	W	WO 2003-IB5311	20031120
		JP 2004-553032	20031120

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003280117	A1 Based on	WO 2004045592
EP 1583541	A2 Based on	WO 2004045592
US 2006079448	A1 Div ex	US 6969702
JP 2006514630	W Based on	WO 2004045592

PRIORITY APPLN. INFO: US 2002-427912P 20021120; US
2003-718071 20031120; US
2004-850055 20040519; US
2004-993667 20041119; US
2005-288495 20051128

INT. PATENT CLASSIF.:
MAIN: A01N037-18; A61K031-00; A61K031-675; A61K038-17; A61K038-22; A61K045-00
SECONDARY: A61K031-352; A61K031-4015; A61K031-522; A61K031-7042; A61K031-7076; A61K035-66; A61K035-74; A61K038-00; A61K038-12; A61K038-23; A61P009-00; A61P009-10; A61P019-00; A61P025-00; A61P025-14; A61P025-16; A61P025-28; A61P037-00; A61P043-00

BASIC ABSTRACT:

WO2004045592 A UPAB: 20040702

NOVELTY - In modulating neurogenesis in neural tissue of a patient exhibiting symptom(s) of central nervous system disorder, such as neurodegenerative, ischemic or learning and memory disorder or neurological trauma, at least one agent (A) that elevates intracellular cyclic adenosine monophosphate (cAMP) levels or at least one agent (B) that elevates intracellular Ca2+ levels in the neural tissue, is administered where (A) modulates and (B) induces neurogenesis.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) method (M1) for increasing the intracellular levels of cAMP in a cell or method (M2) for stimulating intracellular cAMP in a cell of a patient involving: contacting the cell, or administering to the patient an agent selected from (des-Arg9,Leu8)-bradykinin, (Des-Arg9)-bradykinin, alpha-neoendorphin, CART (61-102), DTLET, eledoisin, urotensin II, (NIe8, Tyr34)-parathyroid hormone (1-34) amide and/or (Cys3,6, Tyr8, Pro9)-Substance P; and

(2) modulating neurogenesis in vitro by:

(a) culturing a population of neural cells, comprising neural stem cells;

(b) adding at least one neurogenesis modulating agent to the cultured cells; and

(c) repeating step (a) and (b) to achieve a desired level of neurogenesis.

ACTIVITY - Nootropic; Neuroprotective; CNS-Gen.; Cerebroprotective; Vasotropic; Anticonvulsant; Antiparkinsonian; Hemostatic; Hypertensive; Muscular-Gen.; Ophthalmological; Antiinflammatory; Analgesic; Antidiabetic.

MECHANISM OF ACTION - Neurogenesis modulator; Neural stem or progenitor cell proliferation, differentiation and/or migration modulator; Neural tissue G-protein coupled receptor activator; Neurogenesis inducer; Intracellular neural cAMP enhancer; Intracellular neural cAMP stimulator; Intracellular neural Ca2+ enhancer.

N-6,2-O-Dibutyryl-adenosine (a) was studied for induction of proliferation and increase in the cAMP levels in mouse adult neural stem cells by adding to the culture at 100 nM. After 15 minutes cAMP levels were measured and after 4 days ATP levels were measured. Control cells were treated with vehicle. ATP Level (nM, ATP/well), fold induction of ATP, cAMP level (pmol/well) and fold induction of cAMP in the cells treated with (a)/vehicle were found to be: 13.9 plus or minus 1.1/9.3 plus or minus 0.6, 1.5/1, 0.1 plus or minus 0.01/0.02 plus or minus 0.01 and 4.5/-, respectively.

USE - For modulating neurogenesis in neural tissue of a patient exhibiting at least one symptom of central nervous system disorder, such as neurodegenerative disorder, ischemic disorder, neurological trauma and learning and memory disorder, e.g. Parkinson's disease and Parkinson's disorders, Huntington's disease, Alzheimer's disease, multiple sclerosis, amyotrophic lateral sclerosis, Shy-Drager syndrome, progressive supranuclear palsy, Lewy body disease, spinal ischemia, ischemic stroke, cerebral infarction, spinal cord injury, cancer-related brain and spinal cord injury, multi-infarct dementia and geriatric dementia; for increasing

the intracellular cAMP levels in a cell (preferably a cell from a neural tissue); for stimulating intracellular cAMP in a cell of a patient; and for in vitro modulation of neurogenesis (claimed). Also useful for the treatment of idiopathic orthostatic hypotension, structural lesions of cerebellum (e.g. those associated with infarcts, hemorrhage or tumors), spinocerebellar degenerations (e.g. associated with Friedreich's ataxia), abetalioproteinemia, Refsum's disease, cerebellar ataxia, multiple systems atrophy, ***ataxia-telangiectasia***, mitochondrial multisystem disorders, acute disseminated encephalomyelitis, adrenoleukodystrophy, adrenomyeloneuropathy, Leber's hereditary optic dystrophy, HTLV-associated myelopathy, progressive bulbar palsy, progressive muscular atrophy, primary lateral sclerosis, progressive pseudobulbar palsy, spinal muscular atrophy, plexopathy, acute branchial neuritis, peripheral neuropathy, multiple mononeuropathies, polyneuropathies, nerve palsy, carpal tunnel syndrome, peroneal nerve palsy, radial nerve palsy, Guillain-Barre syndrome, chronic relapsing, hereditary motor and sensory neuropathy, myasthenia gravis, neuro-ophthalmological disorders, cranial nerve palsies, trigeminal neuralgia, Bell's palsy, glossopharyngeal neuralgia, radiation-induced injury of the nervous system, chemotherapy-induced neuropathy, taxol neuropathy, vincristine neuropathy, diabetic neuropathy, autonomic neuropathy, polyneuropathy, mononeuropathy, transient ischemic attacks, subclavian steal syndrome, drop attacks, ischemic stroke, hemorrhagic stroke and brain infarction; for the detection of endogenous agents in cells that are involved in the mediation of signal transduction pathways in the regulation of neurogenesis function; and in the diagnosis of diseases and determine the role of stem and progenitor cells in the disease.

ADVANTAGE - The agent modulates neurogenesis in neural tissue by modulating proliferation, differentiation, migration or survival of neural stem cells or progenitor cells in the tissue; by maintaining or increasing the amount or percentage of doublecortin positive cells in the neural tissue relative to a patient not dosed with the agent or by activation of a G-protein coupled receptor in the neural tissue. The method results in elevation of cAMP levels of the neural stem cells by at least 20% compared to untreated tissue. The in vivo induction of neurogenesis allows treatment of disorders caused by cell loss, injury or disease by endogenous replacement and obviates the need for transplanting foreign cells into a patient. Neurogenesis can also be induced by administration of the neurogenesis-modulating agent directly into a desired site, which avoids unnecessary systemic administration and possible side effects and further provides an alternative to the use of drugs and the controversial use of large quantities of embryonic tissue for treatment of Parkinson's disease.

Dwg.0/1

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; DCN
MANUAL CODES: CPI: B04-A01; B04-A03; B04-A04; B04-A05; B04-A06; B04-B03B; B04-C01; B04-H03; B04-J01; B04-J03B; B04-J04A; B04-J04B; B04-J05; B04-J07; B04-J08; B04-J09; B04-J11; B04-J13; B05-B01M; B06-H; B07-H; B10-B02E; B10-B02G; B10-B03B; B10-B04B; B10-C04B; B10-E02; B12-K04; B14-F02B; B14-F02D; B14-J01A3; B14-J01A4; B14-J02; B14-J05; B14-L01; B14-N03; B14-N16; B14-S01

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DC B02 B03
IC ICM A01N037-18; A61K031-00; A61K031-675; A61K038-17; A61K038-22; A61K045-00
ICS A61K031-352; A61K031-4015; A61K031-522; A61K031-7042; A61K031-7076;

A61K035-66; A61K035-74; A61K038-00; A61K038-12; A61K038-23;
A61P009-00; A61P009-10; A61P019-00; A61P025-00; A61P025-14;
A61P025-16; A61P025-28; A61P037-00; A61P043-00

MC CPI: B04-A01; B04-A03; B04-A04; B04-A05; B04-A06; B04-B03B; B04-C01;
B04-H03; B04-J01; B04-J03B; B04-J04A; B04-J04B; B04-J05; B04-J07;
B04-J08; B04-J09; B04-J11; B04-J13; B05-B01M; B06-H; B07-H; B10-B02E;
B10-B02G; B10-B03B; B10-B04B; B10-C04B; B10-E02; B12-K04; B14-F02B;
B14-F02D; B14-J01A3; B14-J01A4; B14-J02; B14-J05; B14-L01; B14-N03;
B14-N16; B14-S01

DRN 0018-U; 0026-U; 0066-U; 0107-U; 0152-U; 0163-U; 0171-U; 0192-U; 0501-U;
0971-U; 1274-U; 1361-U; 1393-U; 1449-U; 1553-U; 1874-U; 1876-U; 1969-U;
2007-U; 2026-U; 2032-U

CMC UPB 20040702

M1 *01* D011 D601 F012 F014 F423 F521 G010 G013 G100 H1 H100 H101 H181
H182 H4 H401 H441 H481 H5 H598 H8 H9 J0 J011 J012 J1
J111 J171 J172 J3 J311 J371 K0 K2 K224 L2 L250 M210 M211
M271 M280 M281 M311 M312 M313 M314 M315 M320 M321 M322 M331 M332
M333 M340 M342 M343 M349 M371 M381 M391 M392 M423 M510 M511 M520
M521 M530 M531 M540 M620 M781 M904 M905 M910 P444 P446 P510 P517
P525 P526 P528 P617 P922
DCN: R01874-K; R01874-T; R01874-U

M1 *02* M423 M781 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RA00F4-K; RA00F4-T; RA00F4-U

M1 *03* M423 M781 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RA0GBQ-K; RA0GBQ-T; RA0GBQ-U

M1 *04* M423 M781 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RA05BP-K; RA05BP-T; RA05BP-U

M1 *05* M423 M781 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RAAEIC-K; RAAEIC-T; RAAEIC-U

M1 *06* D011 D601 F014 F016 F750 G010 G013 G100 H1 H101 H182 H4 H402
H441 H481 H8 J0 J014 J1 J172 J3 J311 J321 J373 J5 J523
L9 L941 L999 M1 M123 M126 M129 M132 M139 M280 M311 M312 M313
M314 M321 M322 M323 M331 M332 M333 M340 M342 M343 M349 M373 M381
M391 M393 M412 M423 M511 M521 M532 M540 M781 M904 M905 P444 P446
P510 P517 P525 P526 P528 P617 P922
RIN: 00598
DCN: R10548-K; R10548-T; R10548-U

M1 *07* F011 F012 F014 F016 F017 F423 F750 G013 G100 H1 H100 H121 H2
H211 H4 H401 H441 H8 J0 J014 J3 J312 J373 J5 J523 L9
L941 L999 M1 M123 M132 M210 M214 M232 M240 M281 M311 M312 M315
M321 M323 M332 M333 M340 M342 M349 M372 M381 M392 M413 M423 M510
M522 M531 M540 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528
P617 P922
RIN: 00598
DCN: R06740-K; R06740-T; R06740-U

M1 *08* F011 F012 F014 F016 F423 F750 G010 G013 G100 H1 H101 H121 H181
H2 H211 H4 H401 H441 H8 J0 J014 J3 J312 J373 J5 J523
L9 L941 L999 M1 M123 M129 M132 M139 M280 M311 M312 M315 M321
M323 M332 M342 M343 M349 M372 M381 M392 M413 M423 M510 M522 M532
M540 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
RIN: 00598
DCN: RA09A6-K; RA09A6-T; RA09A6-U

M1 *09* F014 F521 G010 G100 H1 H100 H181 H4 H401 H481 H8 J0 J011
J012 J1 J171 J172 J3 J371 K0 L2 L250 M280 M311 M312 M313
M314 M315 M321 M331 M332 M333 M340 M342 M343 M349 M371 M381 M391
M423 M510 M520 M521 M530 M531 M540 M620 M781 M904 M905 M910 P444
P446 P510 P517 P525 P526 P528 P617 P922
DCN: R01553-K; R01553-T; R01553-U

M1 *10* F012 F423 G010 G013 G100 H1 H100 H101 H181 H182 H4 H401 H441
H8 J0 J011 J012 J1 J111 J171 J172 J3 J371 K0 K2 K224

L2 L250 M280 M311 M312 M313 M314 M320 M321 M322 M332 M342 M343
M349 M371 M381 M391 M392 M423 M510 M520 M521 M530 M531 M540 M620
M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R06739-K; R06739-T; R06739-U

M1 *11* D011 D601 F011 F012 F014 F019 F423 F499 F521 G010 G019 G100 H1
H101 H183 H2 H213 H4 H405 H484 H5 H598 H8 H9 J0 J014
J1 J173 J3 J312 J373 K0 L2 L250 M210 M211 M271 M281 M311
M312 M313 M314 M315 M322 M323 M331 M332 M333 M340 M342 M343 M349
M371 M381 M393 M423 M511 M523 M532 M540 M781 M904 M905 P444 P446
P510 P517 P525 P526 P528 P617 P922
DCN: RA25EJ-K; RA25EJ-T; RA25EJ-U

M1 *12* M423 M781 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RAEJ85-K; RAEJ85-T; RAEJ85-U

M1 *13* D011 D601 F011 F012 F014 F019 F423 F521 F599 G010 G013 G019 G100
H1 H101 H182 H2 H211 H4 H405 H442 H483 H8 J0 J014 J1
J172 J3 J311 J373 K0 L2 L250 M280 M311 M312 M313 M314 M315
M321 M323 M331 M332 M333 M340 M342 M343 M349 M371 M381 M393 M423
M511 M523 M533 M540 M781 M904 M905 P444 P446 P510 P517 P525 P526
P528 P617 P922
DCN: RA0KX2-K; RA0KX2-T; RA0KX2-U

M1 *14* D011 D601 F014 F521 G010 G013 G100 H1 H100 H101 H181 H182 H4
H401 H441 H481 H5 H598 H8 H9 J0 J011 J012 J1 J171 J172
J3 J371 K0 L2 L250 M210 M211 M271 M280 M281 M311 M312 M313
M314 M315 M321 M331 M332 M333 M340 M342 M343 M349 M371 M381 M391
M423 M510 M511 M520 M521 M530 M531 M540 M620 M781 M904 M905 M910
P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R01876-K; R01876-T; R01876-U

M1 *15* D011 D601 F014 F521 G010 G013 G019 G100 H1 H101 H183 H4 H405
H442 H484 H5 H598 H8 H9 J0 J014 J1 J173 J3 J373 K0
L2 L250 L299 M210 M211 M271 M281 M311 M312 M313 M314 M315 M321
M323 M331 M332 M333 M340 M342 M343 M349 M371 M381 M393 M423 M511
M521 M533 M540 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528
P617 P922
DCN: RAA91B-K; RAA91B-T; RAA91B-U

M1 *16* F012 F423 G010 G013 G100 H1 H100 H101 H181 H182 H4 H401 H441
H498 H8 H9 J0 J011 J012 J1 J111 J171 J172 J3 J371 K0
K2 K224 L2 L250 M280 M311 M312 M313 M314 M320 M321 M322 M332
M342 M343 M349 M371 M381 M391 M392 M423 M510 M520 M521 M530 M531
M540 M620 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617
P922
DCN: R06672-K; R06672-T; R06672-U; R06673-K; R06673-T; R06673-U

M1 *17* D011 D601 F011 F012 F014 F019 F423 F499 F521 G010 G013 G019 G100
H1 H101 H183 H2 H213 H4 H404 H442 H482 H5 H598 H8 H9
J0 J014 J1 J173 J3 J312 J373 K0 L2 L250 L299 M210 M211
M271 M281 M311 M312 M313 M314 M315 M322 M323 M332 M333 M340 M342
M343 M349 M371 M381 M393 M412 M423 M511 M523 M533 M540 M781 M904
M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R01836-K; R01836-T; R01836-U

M1 *18* D011 D601 G010 G013 G100 H1 H100 H181 H5 H598 H9 J0 J011
J012 J1 J171 J172 J3 J371 K0 K4 K421 M210 M211 M271 M280
M281 M311 M312 M313 M321 M332 M342 M343 M349 M371 M381 M391 M423
M510 M511 M520 M530 M531 M540 M781 M904 M905 P444 P446 P510 P517
P525 P526 P528 P617 P922
DCN: R10850-K; R10850-T; R10850-U

M1 *19* F011 F012 F019 F423 F499 G010 G100 H1 H100 H181 H2 H213 H4
H401 H481 H8 J0 J014 J1 J171 J3 J312 J373 K0 L2 L250
M280 M311 M312 M314 M315 M321 M322 M332 M333 M340 M342 M343 M349
M371 M381 M391 M393 M423 M510 M523 M531 M540 M781 M904 M905 P444
P446 P510 P517 P525 P526 P528 P617 P922
DCN: RA6W4W-K; RA6W4W-T; RA6W4W-U

M1 *20* D011 D601 F014 F521 G010 G013 G100 H1 H101 H182 H4 H404 H441
H483 H498 H5 H598 H8 H9 J0 J014 J1 J173 J3 J373 M210
M211 M271 M281 M312 M313 M314 M315 M321 M322 M323 M332 M333 M340
M342 M343 M349 M371 M381 M393 M423 M511 M521 M532 M540 M781 M904
M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RA2U3M-K; RA2U3M-T; RA2U3M-U

M1 *21* F011 F012 F014 F019 F423 F499 F521 F599 G010 G100 H1 H101 H183
H2 H212 H4 H405 H484 H5 H598 H8 H9 J0 J014 J1 J173
J3 J312 J373 K0 L2 L250 L299 M210 M211 M271 M281 M312 M313
M314 M315 M323 M331 M332 M333 M340 M342 M343 M349 M371 M381 M393
M423 M510 M523 M531 M540 M781 M904 M905 P444 P446 P510 P517 P525
P526 P528 P617 P922
DCN: RAEJ8H-K; RAEJ8H-T; RAEJ8H-U

M1 *22* F011 F012 F014 F019 F211 F423 F499 G013 G100 H1 H100 H102 H182
H2 H213 H4 H402 H421 H481 H5 H541 H8 J0 J014 J1 J171
J3 J312 J373 K0 L2 L250 L299 M210 M211 M272 M281 M311 M312
M313 M314 M321 M322 M332 M342 M343 M349 M371 M373 M381 M391 M393
M423 M510 M523 M531 M540 M781 M904 M905 P444 P446 P510 P517 P525
P526 P528 P617 P922
DCN: RA0JNA-K; RA0JNA-T; RA0JNA-U

M1 *23* F011 F012 F015 F019 F423 F499 G010 G100 H1 H100 H181 H2 H211
H4 H401 H481 H5 H598 H8 H9 J0 J014 J1 J171 J3 J312
J373 J5 J521 L9 L941 M210 M211 M271 M281 M311 M312 M313 M315
M321 M323 M331 M332 M333 M340 M342 M343 M349 M371 M381 M391 M393
M423 M510 M522 M531 M540 M781 M904 M905 P444 P446 P510 P517 P525
P526 P528 P617 P922
DCN: RAEJ8M-K; RAEJ8M-T; RAEJ8M-U

M1 *24* F014 F521 G010 G100 H1 H101 H182 H4 H402 H482 H5 H598 H8
H9 J0 J014 J1 J171 J3 J373 M210 M211 M271 M281 M311 M312
M313 M314 M315 M321 M322 M323 M331 M332 M333 M340 M342 M343 M349
M371 M381 M392 M393 M423 M510 M521 M531 M540 M781 M904 M905 P444
P446 P510 P517 P525 P526 P528 P617 P922
DCN: RA3908-K; RA3908-T; RA3908-U

M2 *25* D015 D932 H2 H212 J5 J522 L9 L910 M210 M211 M273 M282 M320
M412 M511 M520 M530 M540 M781 M904 M905 M910 P444 P446 P510 P517
P525 P526 P528 P617 P922
DCN: R00163-K; R00163-T; R00163-U; R12974-K; R12974-T; R12974-U

M2 *26* D011 D015 D932 H1 H181 H2 H201 H212 J5 J522 L9 L910 M210
M211 M273 M283 M320 M412 M511 M520 M530 M540 M781 M904 M905 M910
P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R00152-K; R00152-T; R00152-U; R11671-K; R11671-T; R11671-U

M2 *27* D014 D023 D120 G015 G100 H4 H404 H405 H421 H444 H8 J5 J521
J522 L9 L960 M1 M113 M280 M320 M412 M511 M520 M531 M540 M781
M904 M905 M910 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: ***R00971-K; R00971-T; R00971-U;***
RA0055-K; RA0055-T; RA0055-U

M2 *28* D011 D015 D932 H1 H181 H2 H201 H212 J5 J522 J581 L9 L910
M210 M211 M213 M231 M262 M273 M281 M282 M314 M321 M332 M342 M381
M391 M412 M511 M520 M530 M540 M781 M904 M905 P444 P446 P510 P517
P525 P526 P528 P617 P922
DCN: R20131-K; R20131-T; R20131-U

M2 *29* D015 D932 H2 H212 J5 J522 L9 L910 M210 M211 M214 M232 M273
M282 M320 M412 M511 M520 M530 M540 M781 M904 M905 P444 P446 P510
P517 P525 P526 P528 P617 P922
DCN: R21071-K; R21071-T; R21071-U

M2 *30* F012 F014 F015 F522 G013 G100 H5 H594 H9 J5 J521 J581 L9
L921 M1 M123 M131 M210 M211 M240 M271 M281 M320 M413 M510 M521
M531 M540 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617
P922
DCN: R11079-K; R11079-T; R11079-U

M2 *31* D023 D210 M210 M211 M214 M232 M240 M282 M320 M412 M511 M520 M530
M540 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RAAWOS-K; RAAWOS-T; RAAWOS-U
M2 *32* D011 D023 D631 G015 G100 H5 H543 H8 M1 M123 M132 M210 M211
M272 M283 M311 M321 M342 M412 M511 M520 M531 M540 M640 M781 M904
M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R04935-K; R04935-T; R04935-U
M2 *33* C017 C100 C720 C800 C801 C803 C804 C805 C806 C807 F011 F013 F522
G013 G015 G019 G100 H1 H181 H2 H201 H5 H581 H6 H602 H609
H643 H8 K0 L7 L721 M1 M121 M129 M132 M139 M150 M280 M311
M312 M321 M322 M332 M342 M343 M373 M393 M411 M510 M521 M533 M540
M640 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RA7PW6-K; RA7PW6-T; RA7PW6-U
M2 *34* F013 F014 F016 F530 G013 G100 J5 J521 K0 L1 L110 L2 L250
L9 L941 M1 M113 M210 M211 M240 M273 M281 M320 M413 M510 M521
M531 M540 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617
P922
DCN: RA06CF-K; RA06CF-T; RA06CF-U
M2 *35* D015 D931 H1 H101 H182 H2 H212 J5 J522 L9 L910 M210 M211
M273 M282 M312 M321 M332 M342 M383 M391 M412 M511 M520 M530 M540
M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R03933-K; R03933-T; R03933-U
M2 *36* G015 G019 G100 H4 H404 H444 H7 H721 H8 J5 J581 M1 M121
M135 M280 M312 M321 M332 M342 M372 M391 M414 M510 M520 M532 M540
M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R19932-K; R19932-T; R19932-U
M2 *37* C017 C100 C800 C801 C803 C804 C805 C806 C807 D011 D013 D830 H2
H211 J0 J011 J2 J211 K0 K6 K630 M210 M211 M212 M263 M272
M273 M281 M282 M320 M411 M511 M520 M530 M540 M640 M781 M904 M905
P444 P446 P510 P517 P525 P526 P528 P617 P922
RIN: 01190
DCN: R11856-K; R11856-T; R11856-U
M2 *38* C017 C100 C800 C801 C803 C804 C805 C806 C807 D011 D022 E800 F011
F014 F553 H1 H183 H2 H203 H6 H685 M210 M211 M273 M281 M311
M313 M321 M332 M342 M344 M353 M383 M391 M411 M511 M521 M530 M540
M640 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RA6KYT-K; RA6KYT-T; RA6KYT-U
M2 *39* F012 F013 F014 F015 F016 F431 F432 J5 J521 K0 L1 L142 L9
L941 M1 M116 M210 M211 M240 M281 M320 M413 M510 M522 M530 M540
M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R11076-K; R11076-T; R11076-U
M2 *40* D013 D016 D023 D026 D029 D030 D220 H4 H403 H421 H462 H7 H715
H721 H8 J0 J011 J2 J261 J5 J521 M210 M211 M212 M240 M262
M281 M283 M320 M412 M511 M520 M530 M540 M781 M800 M904 M905 P444
P446 P510 P517 P525 P526 P528 P617 P922
RIN: 03577
DCN: R04356-K; R04356-T; R04356-U
M2 *41* B615 B701 B713 B720 B815 B831 B840 D011 D012 D013 D016 D019 D030
D160 D931 H1 H100 H122 H2 H201 J0 J012 J2 J222 L910 M210
M213 M231 M262 M282 M320 M411 M512 M520 M530 M540 M781 M904 M905
P444 P446 P510 P517 P525 P526 P528 P617 P922
RIN: 08000
DCN: RADLVX-K; RADLVX-T; RADLVX-U
M2 *42* B615 B701 B713 B720 B815 B831 B840 D011 D012 D013 D016 D019 D160
D931 H1 H100 H122 H2 H201 H4 H401 H421 H6 H602 H621 H8
L943 M280 M320 M411 M512 M520 M530 M540 M781 M904 M905 P444 P446
P510 P517 P525 P526 P528 P617 P922
RIN: 08000 08000
DCN: R18084-K; R18084-T; R18084-U; R18085-K; R18085-T; R18085-U
M2 *43* B615 B701 B713 B720 B815 B831 B840 D011 D012 D013 D016 D019 D160

D931 H1 H100 H122 H2 H201 H4 H401 H421 H6 H603 H621 H8
L943 M280 M320 M411 M512 M520 M530 M540 M781 M904 M905 P444 P446
P510 P517 P525 P526 P528 P617 P922
RIN: 08000
DCN: RA04NE-K; RA04NE-T; RA04NE-U

M2 *44* D011 D024 D640 G013 G100 H403 H443 H602 H641 K431 K432 M113 M210
M211 M271 M280 M281 M320 M412 M510 M511 M520 M530 M531 M540 M620
M650 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
RIN: 01843
DCN: RAEJ8B-K; RAEJ8B-T; RAEJ8B-U

M2 *45* C017 C100 C800 C801 C803 C804 C805 C806 C807 G015 G100 H1 H100
H181 H4 H402 H442 H8 M280 M312 M321 M332 M342 M373 M391 M411
M510 M520 M531 M540 M640 M781 M904 M905 P444 P446 P510 P517 P525
P526 P528 P617 P922
DCN: R11187-K; R11187-T; R11187-U

M2 *46* C017 C100 C720 C800 C801 C803 C804 C805 C806 C807 D011 D023 D030
E310 H1 H181 H2 H201 H4 H402 H442 H8 M210 M211 M273 M280
M281 M320 M411 M511 M520 M530 M540 M640 M781 M904 M905 P444 P446
P510 P517 P525 P526 P528 P617 P922
RIN: 05171
DCN: R22680-K; R22680-T; R22680-U

M2 *47* B215 B713 B720 B819 B831 C108 C720 C800 C801 C802 C803 C804 C805
C807 F014 F521 H1 H100 H181 M280 M312 M321 M332 M342 M373 M391
M411 M510 M521 M530 M540 M640 M781 M904 M905 P444 P446 P510 P517
P525 P526 P528 P617 P922
DCN: R12275-K; R12275-T; R12275-U

M2 *48* C316 D011 D022 D601 H103 H181 J012 J172 K353 M210 M211 M273 M280
M283 M311 M312 M321 M332 M342 M373 M382 M391 M392 M412 M511 M520
M530 M540 M620 M650 M781 M904 M905 P444 P446 P510 P517 P525 P526
P528 P617 P922
DCN: RA4D8G-K; RA4D8G-T; RA4D8G-U

M2 *49* G037 G553 H4 H403 H462 H481 H7 H722 H8 J0 J011 J1 J171
M280 M315 M322 M331 M332 M342 M372 M373 M391 M415 M510 M520 M530
M541 M781 M904 M905 M910 P444 P446 P510 P517 P525 P526 P528 P617
P922
DCN: R01361-K; R01361-T; R01361-U

M2 *50* G037 G553 H4 H402 H461 H481 H7 H721 H8 J0 J011 J1 J171
J5 J561 M280 M315 M322 M331 M332 M342 M372 M373 M391 M415 M510
M520 M530 M541 M781 M904 M905 M910 P444 P446 P510 P517 P525 P526
P528 P617 P922
DCN: R01449-K; R01449-T; R01449-U; R10058-K; R10058-T; R10058-U

M2 *51* D011 D023 D130 H4 H402 H461 H481 H8 J0 J011 J1 J171 M280
M314 M315 M321 M331 M332 M342 M372 M373 M391 M412 M511 M520 M530
M540 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
RIN: 01010
DCN: R03935-K; R03935-T; R03935-U

M2 *52* G032 G033 G060 G630 H100 H181 H4 H402 H403 H461 H481 H483 H720
H721 H731 H8 J011 J171 M280 M314 M316 M321 M332 M333 M334 M342
M343 M344 M372 M373 M383 M391 M415 M510 M520 M530 M541 M620 M650
M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RAEJ8C-K; RAEJ8C-T; RAEJ8C-U

M2 *53* G037 G553 H4 H402 H461 H481 H7 H721 H8 J0 J011 J2 J271
J5 J561 M210 M211 M272 M281 M315 M316 M321 M332 M333 M342 M372
M373 M391 M415 M510 M520 M530 M541 M781 M904 M905 P444 P446 P510
P517 P525 P526 P528 P617 P922
DCN: R21800-K; R21800-T; R21800-U

M2 *54* A111 A960 B615 B702 B713 B720 B795 B815 B833 C710 D011 D019 D931
F012 F013 F014 F015 F113 H1 H100 H122 H2 H201 H4 H402 H422
H8 L943 M280 M311 M321 M342 M373 M391 M411 M511 M521 M530 M540
M630 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922

DCN: R18980-K; R18980-T; R18980-U
M2 *55* D021 D601 H1 H102 H181 H4 H401 H481 H5 H541 H8 M210 M213
M232 M273 M281 M313 M321 M332 M343 M383 M391 M412 M511 M520 M530
M540 M781 M904 M905 M910 P444 P446 P510 P517 P525 P526 P528 P617
P922
DCN: R01969-K; R01969-T; R01969-U
M2 *56* F011 F013 F014 F433 G013 G017 G100 H1 H100 H141 H181 H2 H201
H5 H521 H542 H6 H601 H602 H642 H8 J0 J011 J3 J321 M1
M123 M136 M210 M211 M272 M282 M313 M321 M332 M342 M383 M391 M413
M510 M521 M532 M540 M781 M904 M905 P444 P446 P510 P517 P525 P526
P528 P617 P922
DCN: RA0GIN-K; RA0GIN-T; RA0GIN-U
M2 *57* F012 F522 G012 G013 G100 H103 H141 H401 H441 K431 K432 M121 M143
M210 M211 M240 M271 M281 M311 M320 M321 M342 M373 M391 M413 M510
M520 M521 M530 M532 M540 M620 M650 M781 M904 M905 P444 P446 P510
P517 P525 P526 P528 P617 P922
DCN: RA0M8Z-K; RA0M8Z-T; RA0M8Z-U
M2 *58* F011 F012 F013 F423 G010 G017 G100 H1 H102 H141 H181 H2 H201
H5 H541 H6 H602 H641 H8 J0 J011 J3 J321 M1 M123 M136
M210 M211 M240 M272 M273 M281 M311 M321 M342 M373 M391 M413 M510
M521 M532 M540 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528
P617 P922
DCN: RA61W6-K; RA61W6-T; RA61W6-U
M2 *59* D011 D022 E240 F011 F014 F553 H1 H121 H181 H2 H202 H6 H602
H641 L943 M210 M211 M273 M281 M320 M412 M511 M521 M530 M540 M781
M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
RIN: 03676
DCN: R22668-K; R22668-T; R22668-U
M2 *60* D013 D022 D601 F011 F012 F014 F019 F433 F523 G013 G100 H1 H141
H181 H2 H202 H211 H6 H601 H602 H642 J5 J521 L9 L921 M1
M116 M280 M312 M321 M332 M342 M383 M391 M412 M511 M522 M531 M540
M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R20437-K; R20437-T; R20437-U
M2 *61* D011 D012 E850 F011 F014 F553 H1 H121 H181 H2 H202 L943 M210
M211 M240 M273 M281 M320 M412 M511 M521 M530 M540 M781 M904 M905
P444 P446 P510 P517 P525 P526 P528 P617 P922
RIN: 46639
DCN: RA04JZ-K; RA04JZ-T; RA04JZ-U
M2 *62* D011 D014 D022 D790 E410 F011 F014 F433 H1 H181 H2 H201 H6
H601 H641 J5 J521 L9 L941 M1 M116 M210 M211 M240 M281 M312
M321 M332 M342 M373 M391 M412 M512 M521 M530 M540 M781 M904 M905
P444 P446 P510 P517 P525 P526 P528 P617 P922
RIN: 01123 01608
DCN: RA07U9-K; RA07U9-T; RA07U9-U
M2 *63* C316 F011 F012 F423 G015 G100 H1 H181 H2 H201 H5 H541 H8
J0 J011 J3 J331 K0 K3 K353 M210 M211 M212 M272 M273 M281
M311 M321 M342 M373 M391 M413 M510 M521 M531 M540 M781 M904 M905
P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R06022-K; R06022-T; R06022-U; R16364-K; R16364-T; R16364-U
M2 *64* D011 D022 E800 H1 H103 H182 H2 H201 H6 H602 H641 M210 M211
M273 M282 M313 M321 M332 M342 M383 M391 M412 M511 M520 M530 M540
M781 M904 M905 M910 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R00026-K; R00026-T; R00026-U; R08400-K; R08400-T; R08400-U
M2 *65* F011 F014 F017 F433 G013 G019 G100 H1 H181 H2 H201 H4 H401
H421 H6 H601 H602 H642 H8 J5 J581 M1 M113 M280 M313 M321
M332 M342 M381 M391 M413 M510 M521 M532 M540 M781 M904 M905 M910
P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R00066-K; R00066-T; R00066-U
M2 *66* D013 D019 D022 D712 D799 F011 F014 F433 H1 H181 H2 H201 H212
H6 H602 H641 J5 J522 L9 L921 L999 M280 M313 M321 M332 M342

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        M383 M391 M412 M512 M521 M530 M540 M781 M904 M905 P444 P446 P510
        P517 P525 P526 P528 P617 P922
        DCN: R06637-K; R06637-T; R06637-U; R14531-K; R14531-T; R14531-U
M2  *67* D011 D022 E800 F011 F014 F553 H1   H183 H2   H203 H6   H685 J0
        J011 J2   J271 M220 M223 M231 M262 M281 M312 M313 M321 M332 M342
        M383 M392 M412 M511 M521 M530 M540 M781 M904 M905 P444 P446 P510
        P517 P525 P526 P528 P617 P922
        DCN: R04431-K; R04431-T; R04431-U
M2  *68* D014 D740 F011 F014 F433 G013 G100 H1   H181 H2   H201 H211 H6
        H601 H641 J5   J522 J581 L9   L910 M1   M123 M131 M280 M312 M321
        M332 M342 M383 M391 M412 M511 M521 M531 M540 M781 M904 M905 P444
        P446 P510 P517 P525 P526 P528 P617 P922
        DCN: R12049-K; R12049-T; R12049-U
M2  *69* D011 D013 E320 G010 G100 H1   H182 H2   H202 K0   L4   L463 M210
        M211 M273 M282 M311 M322 M342 M373 M392 M412 M511 M520 M531 M540
        M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
        DCN: R17747-K; R17747-T; R17747-U
M2  *70* C017 C100 C800 C801 C803 C804 C805 C806 C807 D013 D023 D740 F011
        F012 F014 F111 F553 H1   H100 H122 H2   H201 H211 H5   H542 H8
        J0   J011 J3   J311 L910 M210 M211 M272 M282 M320 M411 M511 M522
        M530 M540 M640 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528
        P617 P922
        DCN: R07015-K; R07015-T; R07015-U
M2  *71* D023 E340 H4   H401 H461 H8   J0   J011 J2   J251 M210 M211 M272
        M281 M320 M412 M511 M520 M530 M540 M781 M904 M905 P444 P446 P510
        P517 P525 P526 P528 P617 P922
        DCN: R17247-K; R17247-T; R17247-U
M2  *72* D011 D014 D932 H1   H181 H2   H201 H211 J5   J522 L9   L910 M210
        M211 M273 M282 M320 M412 M511 M520 M530 M540 M781 M904 M905 M910
        P444 P446 P510 P517 P525 P526 P528 P617 P922
        DCN: R00501-K; R00501-T; R00501-U
M2  *73* F012 F013 F014 F015 F431 F432 H1   H100 H121 J5   J521 L9   L941
        M1   M116 M280 M320 M413 M510 M522 M530 M540 M781 M904 M905 P444
        P446 P510 P517 P525 P526 P528 P617 P922
        DCN: R11075-K; R11075-T; R11075-U
M2  *74* D011 D021 D029 D030 E550 G030 G530 H1   H181 H2   H201 H4   H402
        H421 H441 H8   J5   J561 M280 M311 M321 M342 M373 M391 M412 M511
        M520 M530 M541 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528
        P617 P922
        DCN: R07064-K; R07064-T; R07064-U; R15129-K; R15129-T; R15129-U
M2  *75* D011 D021 D029 D030 E550 H1   H181 H2   H201 H4   H402 H421 H441
        H7   H716 H721 H8   J5   J561 M210 M213 M231 M273 M281 M320 M412
        M511 M520 M530 M540 M781 M904 M905 M910 P444 P446 P510 P517 P525
        P526 P528 P617 P922
        DCN: R01274-K; R01274-T; R01274-U; R15119-K; R15119-T; R15119-U
M2  *76* G015 G100 H1   H102 H181 H4   H403 H441 H482 H8   M210 M214 M233
        M273 M281 M311 M312 M321 M332 M342 M343 M373 M392 M414 M510 M520
        M531 M540 M781 M904 M905 M910 P444 P446 P510 P517 P525 P526 P528
        P617 P922
        DCN: R02007-K; R02007-T; R02007-U; R06679-K; R06679-T; R06679-U
M2  *77* G015 G100 H1   H102 H181 H4   H403 H441 H482 H8   M210 M214 M233
        M273 M281 M311 M312 M321 M332 M342 M343 M373 M392 M414 M510 M520
        M531 M540 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617
        P922
        DCN: RA1EEJ-K; RA1EEJ-T; RA1EEJ-U
M2  *78* G016 G100 H1   H102 H181 H4   H403 H442 H481 H8   M210 M213 M232
        M273 M281 M312 M321 M332 M343 M373 M391 M414 M510 M520 M531 M540
        M781 M904 M905 M910 P444 P446 P510 P517 P525 P526 P528 P617 P922
        DCN: R01393-K; R01393-T; R01393-U; R06678-K; R06678-T; R06678-U
M2  *79* G016 G100 H1   H102 H181 H4   H403 H442 H481 M210 M214 M233 M273
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M281 M312 M321 M332 M343 M373 M391 M414 M510 M520 M531 M540 M781
M904 M905 M910 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R02026-K; R02026-T; R02026-U; R14963-K; R14963-T; R14963-U

M2 *80* F012 F013 F016 F432 H1 H102 H181 H4 H402 H482 H8 J5 J521
M210 M214 M233 M273 M281 M311 M312 M321 M332 M342 M343 M373 M392
M413 M510 M521 M530 M540 M781 M904 M905 P444 P446 P510 P517 P525
P526 P528 P617 P922
DCN: R06393-K; R06393-T; R06393-U; R12431-K; R12431-T; R12431-U

M2 *81* G010 G015 G100 H1 H102 H181 H4 H403 H441 H482 H5 H581 H8
M280 M311 M312 M314 M315 M321 M332 M342 M343 M373 M383 M391 M393
M414 M510 M520 M532 M540 M781 M904 M905 P444 P446 P510 P517 P525
P526 P528 P617 P922
DCN: R16589-K; R16589-T; R16589-U; R18850-K; R18850-T; R18850-U

M2 *82* G013 G015 G019 G100 H1 H102 H181 H4 H401 H481 H8 J0 J012
J2 J232 M1 M121 M129 M136 M139 M210 M211 M214 M233 M240 M273
M281 M282 M312 M321 M332 M343 M373 M391 M414 M510 M520 M533 M540
M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R04238-K; R04238-T; R04238-U

M2 *83* G015 G100 H1 H102 H181 H4 H403 H442 H481 H8 M210 M214 M233
M273 M281 M312 M321 M332 M343 M373 M391 M414 M510 M520 M531 M540
M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R04844-K; R04844-T; R04844-U

M2 *84* G013 G015 G100 H1 H102 H181 H4 H403 H443 H8 M280 M312 M314
M321 M331 M332 M342 M373 M392 M414 M510 M520 M532 M540 M781 M904
M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R11507-K; R11507-T; R11507-U; R13752-K; R13752-T; R13752-U

M2 *85* G015 G100 H1 H100 H181 H4 H402 H442 H8 J0 J011 J1 J171
M280 M313 M321 M331 M343 M349 M371 M391 M414 M510 M520 M531 M540
M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RA01O7-K; RA01O7-T; RA01O7-U

M2 *86* G015 G100 H1 H100 H181 H4 H402 H442 H8 J0 J011 J1 J171
M280 M312 M321 M332 M343 M349 M371 M391 M414 M510 M520 M531 M540
M781 M800 M904 M905 M910 P444 P446 P510 P517 P525 P526 P528 P617
P922
DCN: R12227-K; R12227-T; R12227-U

M2 *87* D011 D013 D019 D021 D030 E350 H1 H181 H2 H201 H4 H402 H421
H461 H8 M210 M211 M212 M240 M273 M281 M320 M412 M511 M520 M530
M540 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
RIN: 09454
DCN: R03739-K; R03739-T; R03739-U

M2 *88* D011 D019 D022 D621 D680 H4 H401 H481 H5 H541 H7 H715 H721
H8 M1 M126 M132 M210 M211 M212 M240 M272 M281 M311 M321 M343
M373 M391 M412 M512 M520 M530 M540 M781 M904 M905 M910 P444 P446
P510 P517 P525 P526 P528 P617 P922
DCN: R00107-K; R00107-T; R00107-U

M2 *89* D011 D860 F011 F014 F553 G011 G100 H1 H141 H181 H2 H202 M210
M211 M240 M281 M312 M321 M332 M342 M373 M391 M412 M511 M521 M531
M540 M781 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
RIN: 01094 01094
DCN: R14842-K; R14842-T; R14842-U; R14843-K; R14843-T; R14843-U

M2 *90* G015 G100 H5 H581 H6 H602 H608 H642 H8 J0 J013 J1 J171
J3 J331 J371 M210 M211 M215 M231 M272 M273 M281 M313 M322 M332
M342 M343 M349 M381 M383 M391 M414 M510 M520 M531 M540 M781 M904
M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RAEAB8-K; RAEAB8-T; RAEAB8-U

M2 *91* F011 F012 F423 H2 H211 H4 H498 H9 J0 J012 J1 J111 J3
J371 M280 M313 M321 M331 M342 M381 M391 M413 M510 M521 M530 M540
M781 M800 M904 M905 P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R04150-K; R04150-T; R04150-U; R07095-K; R07095-T; R07095-U

M2 *92* G010 G037 G111 G553 H4 H403 H462 H481 H7 H721 H8 J0 J011

J2 J271 M1 M123 M135 M210 M213 M232 M272 M281 M315 M322 M332
M342 M343 M372 M373 M391 M414 M510 M520 M531 M541 M781 M904 M905
P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: RA01PF-K; RA01PF-T; RA01PF-U

M2 *93* G010 G021 G111 G221 H1 H100 H181 H7 H721 J0 J013 J3 J373
M210 M211 M273 M283 M312 M315 M321 M322 M332 M333 M342 M343 M349
M371 M381 M391 M392 M414 M510 M520 M532 M540 M781 M904 M905 P444
P446 P510 P517 P525 P526 P528 P617 P922
DCN: RA1459-K; RA1459-T; RA1459-U

M2 *94* F011 F012 F014 F015 F019 F423 F499 F521 H2 H211 J0 J013 J3
J312 J371 J5 J521 L9 L941 M280 M312 M321 M332 M343 M349 M371
M391 M413 M510 M523 M530 M540 M781 M904 M905 M910 P444 P446 P510
P517 P525 P526 P528 P617 P922
DCN: R02032-K; R02032-T; R02032-U

M2 *95* D011 D014 D670 G010 G100 H1 H181 H2 H201 J0 J012 J2 J211
J221 M1 M123 M136 M210 M211 M272 M273 M281 M320 M412 M511 M520
M531 M540 M781 M904 M905 M910 P444 P446 P510 P517 P525 P526 P528
P617 P922
DCN: R00018-K; R00018-T; R00018-U; R11462-K; R11462-T; R11462-U

M2 *96* G010 G100 H1 H103 H181 J5 J581 M210 M212 M273 M282 M312 M321
M331 M340 M342 M349 M381 M391 M414 M510 M531 M540 M781 M904 M905
P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R17080-K; R17080-T; R17080-U

M2 *97* F011 F012 F013 F014 F433 F541 H1 H101 H123 H2 H201 K0 K7
K742 L9 L910 M280 M320 M413 M510 M522 M530 M540 M781 M904 M905
P444 P446 P510 P517 P525 P526 P528 P617 P922
DCN: R04592-K; R04592-T; R04592-U; R10186-K; R10186-T; R10186-U

M2 *98* C316 F012 F431 G013 G015 G100 H4 H401 H441 H8 J0 J011 J1
J131 K0 K3 K353 K5 K534 L943 M1 M121 M123 M145 M147 M280
M320 M413 M510 M521 M532 M540 M781 M904 M905 P444 P446 P510 P517
P525 P526 P528 P617 P922
DCN: R12996-K; R12996-T; R12996-U

M2 *99* G010 G100 H1 H100 H181 M280 M313 M321 M331 M342 M373 M391 M414
M510 M520 M531 M540 M781 M904 M905 P444 P446 P510 P517 P525 P526
P528 P617 P922
DCN: RA04XY-K; RA04XY-T; RA04XY-U

L221 ANSWER 24 OF 24 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
ACCESSION NUMBER: 2003-341309 [32] WPIX
DOC. NO. CPI: C2003-089517
TITLE: New orthomolecular vitamin E derivatives useful for the treatment of e.g. cancer.
DERWENT CLASS: B02 D21 E13
INVENTOR(S): WILBURN, M D
PATENT ASSIGNEE(S): (WILB-I) WILBURN M D
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 2003007961	A1	20030109	(200332)*		28	A61K038-44

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PATENT NO	KIND	APPLICATION	DATE
US 2003007961	A1	US 2001-886472	20010622

PRIORITY APPLN. INFO: US 2001-886472 20010622

INT. PATENT CLASSIF.:
MAIN: A61K038-44
SECONDARY: A61K031-714; A61K031-726

BASIC ABSTRACT:

US2003007961 A UPAB: 20030522

NOVELTY - Orthomolecular vitamin E derivatives (I) are new.

DETAILED DESCRIPTION - Orthomolecular vitamin E derivatives of formula (I), their salts, esters and solvates are new.

dotted line = optional double bond;

A, B, D, E = H or methyl;

R = reaction product derived from Q1, Q2 or phenyl (optionally substituted by 1-5 Q3);

Q1 = e.g. (flava-3-ol)n, alpha -ketoglutaric acid, alanine, flavin coenzymes (such as flavin mononucleotide or flavin adenine dinucleotide), para-amino benzoic acid (PABA) or zeaxanthin;

n = 1-12;

Q2 = 1-30C alkyl, 2-30C alkenyl or 2-30C alkynyl (all optionally substituted by 1-12 OH, carboxy, amino, halo, nitro, sulfhydryl or J);

J = phenyl or 5-7 membered heterocyclic ring (containing at least one O, N or S) (both optionally substituted by 1-5 OH, carboxy, halo, nitro, amino, sulfhydryl, methyl, 2-10C alkyl, 2-10C alkenyl, 2-10C alkynyl, methoxy, 2-8C alkoxy or -OC(O)R2 (all optionally substituted, and in which at least one C of alkyl, alkenyl or alkynyl is optionally replaced by N, O or S));

R2 = trifluoromethyl, methyl, 1-10C alkyl, 2-10C alkenyl or 2-10C alkynyl (in which at least one C of alkyl, alkenyl or alkynyl is optionally replaced by N, O or S);

Q3 = OH, carboxy, amino, halo, nitro, sulfhydryl, trifluoromethyl, methyl, 1-8C alkyl, 2-8C alkenyl, 2-8C alkynyl or 2-8C alkoxy (all optionally substituted, and in which at least one C of alkyl, alkenyl or alkynyl is optionally replaced by N, O or S).

The stereochemistry at each of the 2', 4' and 8' positions is R or S.

Full definitions are given in the DEFINITIONS (Full Definitions) field.

ACTIVITY - Analgesic; Ophthalmological; Antiinflammatory; Cytostatic; Anorectic; Tranquilizer; Antidepressant; Nootropic; Neuroprotective; Antiparkinsonian; Hepatotropic; Antialcoholic; Cardiant; Antiarthritic; Osteopathic; Antirheumatic; Immunosuppressive; Dermatological; Vasotropic; Antithyroid; Antipsoriatic; Nephrotropic; Antidiabetic; Cerebroprotective; Anti-HIV; Antiarteriosclerotic; Gastrointestinal; Relaxant; Vasotropic; Antisickling; Respiratory; Anticoagulant; Gynecological; Hemostatic; Antiasthmatic; Antigout; Antianemic.

MECHANISM OF ACTION - Platelet Aggregation Inhibitor; Hydroxymethylglutyryl Coenzyme-A (HMG CoA) Reductase Inhibitor.

USE - For effecting a biological activity in an animal, such as aging, longevity, nerve activity, hematopoiesis, maintenance of blood cells, hepatic activity, nephritic activity, heart and cardiovascular function, pulmonary function, muscular function, cartilage health, bone health, joint health, gastrointestinal function, reproductive system function, vision, immune function, cell membrane integrity, pain and inflammation; for treating and preventing cancer, obesity, anxiety, depression, depression secondary to a chronic disease, Alzheimer's disease, Parkinson's disease, demyelineating disorder, peripheral neuropathy, enhancing mood and behavior, cirrhosis, chronic liver disease, alcoholic liver damage, toxic chemical exposure, NSAID-liver damage, estrogen induced liver problems, bile disorder, environmental chemical hypersensitivity, heart and/or artery disease risk due to elevated blood levels of homocysteine, osteoarthritis, rheumatoid arthritis, fibromyalgia, joint injuries, joint inflammation, joint degeneration, osteoporosis, organ transplant rejection, graft rejection, lupus,

uvetitis, Bechet's disease, Graves disease, Guillain-Barre syndrome, psoriasis, acute dermatomyositis, atopic skin disease, scleroderma, eczema, aplastic anemia, primary cirrhosis, autoimmune hepatitis, ulcerative colitis, Crohn's disease, amyotrophic lateral sclerosis, myasthenia gravis, multiple sclerosis, hepatic syndrome, glomerulonephritis, rheumatoid arthritis and diabetes mellitus; for reducing the risk of Sudden Infant Death Syndrome; for maintaining and effecting neuronal membrane ratios of phosphatidyl choline and cholesterol (all claimed). Also useful for treating e.g. septic shock, chronic fatigue syndrome, cachexia, head trauma, immune senescence, inflammatory bowel disorder, muscular dystrophy, neuropathic pain, nervous insult, peripheral nerve injury, renal failure, retinal ischemia, skin aging, diseases relating to lifespan and proliferative capacity of cells, diseases induced by cellular senescence, oxidative stress, age-related memory impairment, ***ataxia-telangiectasia*** syndrome, myocardial infarction, peripheral vasoconstriction, organ dysfunction, platelet consumption and activation, mitral valve pathology associated with acute perioperative pulmonary hypertension, chronic obstructive arterial disease, Raynaud's syndrome, renal artery stenosis, deep vein thrombosis, peripheral arterial occlusion, other blood stream thromboses, alloxan action, free fatty acid induced pancreatitis, abetaliporpoteinemia, spontaneous abortion, infertility, sterility, sexual performance, post-menopausal syndrome, prostaglandin disorders, cataracts, ocular hemorrhage, degenerative retinal damage, retinopathy, endothelial injury, asthma, bronchitis, pneumonia, systemic lupus erythematosus, Zollinger-Ellison syndrome, gout, Batter's syndrome; and useful as dietary supplements.

ADVANTAGE - (I) Enhances activity of tocopherols, tocotrienols and the covalently linked compound in the relevant bio-chemical pathways that affects various conditions such as aging and longevity. (I) Decreases the release of superoxides by human peripheral blood neutrophils; reduces the levels of tumor necrosis factor and interleukin-1; increases antibody titers in blood; reduces total serum LDL-cholesterol, apolipoprotein B, thromboxane A2, platelet factor 4, triglycerides and glucose; and decreases lipoprotein A concentration in blood.

Dwg.0/0

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; GI; DCN
MANUAL CODES: CPI: B03-A; B03-H; B04-B03A; B06-A01; B06-A03; B06-D09; B07-D09; B10-A04; B10-A17; B10-A22; B10-B02E; B10-B02J; B10-B03B; B10-C02; B10-C03; B10-C04C; B10-C04E; B10-E02; B14-C01; B14-C03; B14-C09; B14-D05D; B14-E08; B14-E10C; B14-E11; B14-E12; B14-F01; B14-F01B; B14-F01D; B14-F02; B14-F02B; B14-F02F3; B14-F03; B14-F04; B14-G01; B14-G02; B14-H01B; B14-J01A1; B14-J01A3; B14-J01A4; B14-J01B4; B14-J05; B14-K01; B14-K01A; B14-M01C; B14-N01; B14-N03; B14-N10; B14-N12; B14-N14; B14-N17; B14-P02; B14-S01; B14-S04; B14-S06; D08-B; E06-A01; E06-A03; E06-D09; E07-A02D; E07-D09A; E07-D12; E10-A04; E10-A17B; E10-A22G; E10-B02A1; E10-B02D6; E10-B03B1; E10-C02A; E10-C02F; E10-C03; E10-C04C; E10-C04L2; E10-E02E1; E10-E02F1; E10-E04M1

AN 2003-341309 [32] WPIX
DC B02 D21 E13
IC ICM A61K038-44
ICS A61K031-714; A61K031-726
MC CPI: B03-A; B03-H; B04-B03A; B06-A01; B06-A03; B06-D09; B07-D09; B10-A04; B10-A17; B10-A22; B10-B02E; B10-B02J; B10-B03B; B10-C02; B10-C03; B10-C04C; B10-C04E; B10-E02; B14-C01; B14-C03; B14-C09; B14-D05D; B14-E08; B14-E10C; B14-E11; B14-E12; B14-F01; B14-F01B; B14-F01D;

B14-F02; B14-F02B; B14-F02F3; B14-F03; B14-F04; B14-G01; B14-G02; B14-H01B; B14-J01A1; B14-J01A3; B14-J01A4; B14-J01B4; B14-J05; B14-K01; B14-K01A; B14-M01C; B14-N01; B14-N03; B14-N10; B14-N12; B14-N14; B14-N17; B14-P02; B14-S01; B14-S04; B14-S06; D08-B; E06-A01; E06-A03; E06-D09; E07-A02D; E07-D09A; E07-D12; E10-A04; E10-A17B; E10-A22G; E10-B02A1; E10-B02D6; E10-B03B1; E10-C02A; E10-C02F; E10-C03; E10-C04C; E10-C04L2; E10-E02E1; E10-E02F1; E10-E04M1

DRN 0048-S; 0048-U; 0053-S; 0053-U; 0058-S; 0058-U; 0091-S; 0091-U; 0118-S; 0118-U; 0183-S; 0183-U; 0203-S; 0203-U; 0231-S; 0231-U; 0419-S; 0419-U; 0829-S; 0829-U; 0902-S; 0902-U; 1090-S; 1090-U; 1170-S; 1170-U; 1210-S; 1210-U; 1661-S; 1661-U

CMC UPB 20030522

M2 *01* C216 D011 D012 D016 D019 D025 D120 D931 F012 F013 F014 F015 F113
H1 H101 H122 H181 H2 H201 H4 H402 H422 H8 J0 J011 J2
J241 K0 L7 L730 L8 L812 L821 L831 L834 L943 M210 M211 M225
M232 M240 M271 M281 M283 M311 M313 M321 M332 M342 M343 M349 M373
M381 M391 M412 M512 M521 M530 M540 M710 M904 M905 P220 P411 P420
P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
P811 P812 P813 P816 P820 P822 P922 P943
DCN: RAA9FC-T; RAA9FC-N

M2 *02* C216 D011 D012 D016 D019 D025 D120 D931 F012 F013 F014 F015 F113
H1 H101 H122 H181 H2 H201 H4 H401 H421 H5 H521 H8 J0
J011 J1 J171 K0 L7 L730 L8 L812 L821 L831 L834 L943 M1
M125 M141 M210 M211 M225 M232 M240 M271 M281 M283 M311 M313 M321
M332 M342 M343 M349 M373 M381 M391 M412 M512 M521 M530 M540 M710
M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: RAA9FD-T; RAA9FD-N

M2 *03* C216 D011 D012 D016 D019 D025 D120 D931 F012 F013 F014 F015 F113
H1 H101 H122 H181 H2 H201 H4 H401 H421 H5 H521 H8 J0
J011 J1 J171 K0 L7 L730 L8 L812 L821 L831 L834 L943 M1
M125 M141 M210 M211 M225 M232 M240 M271 M281 M283 M311 M313 M321
M332 M342 M343 M349 M373 M381 M391 M412 M512 M521 M530 M540 M710
M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: RAA9FE-T; RAA9FE-N

M2 *04* D012 D016 D022 D023 D024 D025 D120 H723 M210 M211 M225 M232 M240
M281 M282 M283 M320 M412 M511 M520 M530 M540 M710 M904 M905 P220
P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: 0091-83101-T; 0091-83101-N

M2 *05* F011 F012 F013 F014 F015 F019 F113 F542 H1 H100 H121 H2 H211
H4 H403 H422 H481 H8 J5 J521 L9 L910 M210 M211 M240 M281
M311 M321 M342 M373 M391 M413 M510 M522 M530 M540 M710 M904 M905
P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517
P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721
P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: RA76PC-T; RA76PC-Q; RA76PC-N

M2 *06* D011 D013 D931 F012 F013 F014 F015 F113 H1 H102 H122 H2 H201
H4 H403 H422 H481 H5 H592 H8 H9 K0 L8 L812 L821 L834
L910 M210 M211 M215 M232 M271 M273 M281 M311 M321 M342 M373 M391
M412 M511 M521 M530 M540 M710 M904 M905 P220 P411 P420 P421 P423
P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526
P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812
P813 P816 P820 P822 P922 P943
DCN: RAA9FG-T; RAA9FG-Q; RAA9FG-N

M2 *07* D011 D013 D931 F012 F013 F014 F015 F113 H1 H100 H122 H2 H201
H4 H403 H422 H481 H8 L943 M210 M211 M240 M281 M311 M321 M342
M373 M391 M412 M511 M521 M530 M540 M710 M904 M905 P220 P411 P420
P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
P811 P812 P813 P816 P820 P822 P922 P943
DCN: RA6YSO-T; RA6YSO-Q; RA6YSO-N

M2 *08* F011 F012 F013 F014 F015 F019 F113 F542 H1 H100 H121 H2 H211
H4 H402 H421 H481 H5 H521 H8 J5 J521 K0 L8 L812 L821
L834 L9 L910 M210 M211 M272 M281 M311 M321 M342 M373 M391 M413
M510 M522 M530 M540 M710 M800 M904 M905 P220 P411 P420 P421 P423
P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526
P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812
P813 P816 P820 P822 P922 P943
DCN: RA8CBT-T; RA8CBT-Q; RA8CBT-N

M2 *09* F011 F012 F013 F014 F015 F019 F113 F542 H2 H211 H4 H403 H422
H481 H8 J5 J522 K0 L8 L812 L821 L834 L9 L910 M210 M211
M240 M281 M311 M321 M342 M373 M391 M413 M510 M522 M530 M540 M710
M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R23688-T; R23688-Q; R23688-N

M2 *10* D011 D013 D931 F012 F013 F014 F015 F113 H1 H100 H122 H2 H201
H4 H402 H421 H481 H5 H521 H8 J5 J521 L8 L810 L811 L812
L813 L821 L834 L9 L910 M210 M211 M272 M281 M311 M321 M342 M373
M391 M412 M511 M521 M530 M540 M710 M800 M904 M905 P220 P411 P420
P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
P811 P812 P813 P816 P820 P822 P922 P943
DCN: RA8DA0-T; RA8DA0-Q; RA8DA0-N

M2 *11* D011 D019 D931 F012 F013 F014 F015 F113 H1 H100 H122 H2 H201
H4 H402 H421 H481 H5 H521 H8 L943 M210 M211 M272 M281 M311
M321 M342 M373 M391 M412 M511 M521 M530 M540 M710 M904 M905 P220
P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: RA0TL1-T; RA0TL1-Q; RA0TL1-N

M2 *12* G015 G100 H4 H402 H441 H481 H5 H541 H8 J5 J581 M210 M211
M272 M281 M312 M315 M321 M331 M332 M342 M372 M381 M391 M414 M510
M520 M531 M540 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433
P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616
P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816
P820 P822 P922 P943
DCN: R20165-T; R20165-Q; R20165-N

M2 *13* G017 G100 H4 H401 H441 H8 M210 M211 M214 M233 M240 M283 M320
M414 M510 M520 M531 M540 M710 M904 M905 M910 P220 P411 P420 P421
P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523
P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811
P812 P813 P816 P820 P822 P922 P943
DCN: R01090-T; R01090-Q; R01090-N; R16639-T; R16639-Q; R16639-N

M2 *14* H1 H181 J0 J012 J1 J171 J2 J271 K0 L7 L722 M210 M211
M262 M273 M281 M283 M313 M321 M332 M343 M381 M391 M416 M620 M710
M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R07500-T; R07500-Q; R07500-N; R07501-T; R07501-Q; R07501-N

M2 *15* F012 F013 F014 F015 F019 F113 F542 H4 H402 H421 H481 H5 H521
H8 J5 J522 K0 L8 L812 L821 L831 L835 L9 L910 M1 M116
M210 M211 M272 M281 M311 M321 M342 M373 M391 M413 M510 M522 M530
M540 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444

P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633
P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822
P922 P943
DCN: RAA9FL-T; RAA9FL-Q; RAA9FL-N

M2 *16* G015 G100 H4 H402 H441 H481 H5 H541 H8 J0 J011 J1 J171
M210 M211 M272 M281 M311 M321 M343 M349 M371 M391 M414 M510 M520
M531 M540 M710 M904 M905 P910 P220 P411 P420 P421 P423 P431 P433
P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616
P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816
P820 P822 P922 P943
DCN: R00091-T; R00091-Q; R00091-N

M2 *17* F011 F012 F013 F014 F015 F019 F113 F542 H2 H211 H4 H402 H421
H481 H5 H521 H8 J5 J522 K0 L8 L812 L821 L831 L834 L9
L910 M210 M211 M272 M281 M311 M321 M342 M373 M391 M413 M510 M522
M530 M540 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433 P434
P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625
P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820
P822 P922 P943
DCN: RAA9FM-T; RAA9FM-Q; RAA9FM-N

M2 *18* D011 D013 D931 F012 F013 F014 F015 F113 H1 H103 H122 H2 H201
H4 H402 H421 H481 H5 H521 H8 J5 J521 K0 L8 L812 L821
L831 L834 L9 L910 M210 M211 M272 M273 M281 M282 M311 M321 M342
M373 M391 M412 M511 M521 M530 M540 M710 M904 M905 P220 P411 P420
P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
P811 P812 P813 P816 P820 P822 P922 P943
DCN: RAA9FV-T; RAA9FV-Q; RAA9FV-N

M2 *19* F011 F012 F013 F014 F015 F019 F113 F542 H2 H211 H4 H402 H421
H481 H5 H521 H8 J5 J522 K0 L8 L812 L821 L831 L834 L9
L910 M210 M211 M240 M272 M281 M311 M321 M342 M373 M391 M413 M510
M522 M530 M540 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433
P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616
P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816
P820 P822 P922 P943
DCN: RAA9FW-T; RAA9FW-Q; RAA9FW-N

M2 *20* D011 D019 D931 F012 F013 F014 F015 F113 H1 H102 H122 H2 H201
H4 H402 H421 H481 H5 H521 H8 K0 L8 L812 L821 L831 L834
L943 M210 M211 M272 M273 M281 M311 M321 M342 M373 M391 M412 M511
M521 M530 M540 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433
P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616
P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816
P820 P822 P922 P943
DCN: RAA9FX-T; RAA9FX-Q; RAA9FX-N

M2 *21* F011 F012 F013 F014 F015 F019 F113 F542 H1 H100 H181 H2 H212
H4 H403 H422 H481 H8 J0 J011 J1 J171 J5 J522 K0 L8
L812 L821 L834 L9 L910 M280 M311 M313 M321 M332 M342 M343 M349
M373 M381 M391 M413 M510 M522 M530 M540 M710 M904 M905 P220 P411
P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520
P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731
P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: RAA9FY-T; RAA9FY-Q; RAA9FY-N

M2 *22* H1 H181 J0 J011 J2 J271 K0 L7 L722 M210 M211 M262 M273
M281 M283 M312 M321 M332 M342 M383 M391 M416 M620 M710 M904 M905
M910 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451
P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714
P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R00058-T; R00058-Q; R00058-N

M2 *23* C216 H7 H716 H723 K0 K2 K224 K4 K442 M210 M213 M231 M271
M282 M313 M321 M332 M342 M383 M391 M416 M710 M904 M905 P220 P411
P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520

P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731
P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R06395-T; R06395-Q; R06395-N

M2 *24* H1 H100 H181 J0 J011 J1 J171 M280 M312 M321 M331 M340 M342
M349 M381 M391 M416 M620 M710 M904 M905 M910 P220 P411 P420 P421
P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523
P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811
P812 P813 P816 P820 P822 P922 P943
DCN: R01210-T; R01210-Q; R01210-N; R10414-T; R10414-Q; R10414-N

M2 *25* G030 G038 G530 H1 H100 H161 J0 J011 J1 J151 M280 M320 M415
M510 M520 M530 M541 M710 M904 M905 P220 P411 P420 P421 P423 P431
P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528
P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813
P816 P820 P822 P922 P943
DCN: R06983-T; R06983-Q; R06983-N

M2 *26* F011 F015 F521 H1 H100 H182 H2 H201 J0 J012 J1 J171 J3
J371 M210 M211 M273 M281 M312 M322 M332 M342 M343 M349 M371 M381
M391 M413 M510 M521 M530 M540 M710 M800 M904 M905 P220 P411 P420
P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
P811 P812 P813 P816 P820 P822 P922 P943
DCN: R11742-T; R11742-Q; R11742-N

M2 *27* D013 D023 D120 G013 G100 H4 H403 H443 H8 J5 J521 M1 M113
M280 M320 M412 M511 M520 M531 M540 M710 M904 M905 P220 P411 P420
P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
P811 P812 P813 P816 P820 P822 P922 P943
DCN: ***R06069-T; R06069-Q; R06069-N***

M2 *28* H7 H723 J0 J011 J1 J171 M226 M231 M262 M281 M320 M416 M710
M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R04038-T; R04038-Q; R04038-N; R13711-T; R13711-Q; R13711-N

M2 *29* H1 H100 H181 J0 J011 J1 J171 K0 L2 L250 M280 M314 M321
M332 M343 M349 M381 M391 M416 M620 M710 M904 M905 M910 P220 P411
P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520
P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731
P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R01661-T; R01661-Q; R01661-N; R04740-T; R04740-Q; R04740-N

M2 *30* G037 G038 G039 G562 G599 H4 H402 H462 H7 H725 H8 J5 J562
M1 M126 M135 M210 M211 M240 M283 M316 M321 M333 M342 M415 M510
M520 M530 M542 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433
P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616
P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816
P820 P822 P922 P943
DCN: R11112-T; R11112-Q; R11112-N

M2 *31* D012 D013 D940 H1 H100 H121 H4 H402 H482 H8 J5 J521 L9
L910 M280 M313 M321 M331 M343 M373 M391 M412 M511 M520 M530 M540
M710 M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446
P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646
P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922
P943
DCN: RA1717-T; RA1717-Q; RA1717-N

M2 *32* H1 H181 J0 J011 J1 J171 K0 L7 L722 M210 M211 M273 M283
M311 M321 M342 M349 M381 M391 M416 M620 M710 M904 M905 M910 P220
P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R00829-T; R00829-Q; R00829-N

M2 *33* H1 H181 H4 H401 H481 H8 J0 J011 J1 J171 K0 L7 L722

M210 M211 M273 M283 M313 M321 M332 M343 M381 M391 M416 M620 M710
M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R12266-T; R12266-Q; R12266-N

M2 *34* F014 F521 H1 H100 H181 J0 J012 J1 J171 J3 J371 M280 M312
M322 M332 M342 M343 M349 M371 M381 M391 M413 M510 M521 M530 M540
M710 M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446
P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646
P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922
P943
DCN: R08807-T; R08807-Q; R08807-N

M2 *35* D013 D023 D120 G015 G100 H4 H405 H421 H444 H8 M1 M113 M280
M320 M412 M511 M520 M531 M540 M710 M904 M905 P220 P411 P420 P421
P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523
P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811
P812 P813 P816 P820 P822 P922 P943
DCN: R04686-T; R04686-Q; R04686-N

M2 *36* G015 G037 G038 G111 G563 H4 H405 H442 H463 H7 H721 H8 J0
J012 J1 J151 J2 J261 K0 L8 L818 L821 L832 M280 M312 M321
M332 M342 M372 M391 M414 M510 M520 M531 M541 M710 M904 M905 P220
P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R12870-T; R12870-Q; R12870-N

M2 *37* H1 H181 H4 H401 H481 H8 K0 L7 L722 M210 M211 M273 M283
M312 M321 M332 M342 M383 M391 M416 M620 M710 M904 M905 M910 P220
P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R00231-T; R00231-Q; R00231-N; R04247-T; R04247-Q; R04247-N

M2 *38* H4 H401 H481 H8 J0 J013 J1 J173 M280 M313 M321 M332 M344
M349 M381 M391 M416 M620 M710 M904 M905 M910 P220 P411 P420 P421
P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523
P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811
P812 P813 P816 P820 P822 P922 P943
DCN: R00419-T; R00419-Q; R00419-N; R07029-T; R07029-Q; R07029-N

M2 *39* J0 J011 J1 J171 K0 L2 L250 M210 M211 M273 M281 M311 M321
M342 M349 M381 M391 M416 M620 M710 M904 M905 M910 P220 P411 P420
P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
P811 P812 P813 P816 P820 P822 P922 P943
DCN: R00118-T; R00118-Q; R00118-N

M2 *40* F011 F012 F014 F522 H1 H100 H121 H181 H2 H201 J5 J521 L9
L910 M210 M211 M273 M281 M320 M413 M510 M521 M530 M540 M710 M904
M905 M910 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R00203-T; R00203-Q; R00203-N

M2 *41* G013 G100 J0 J011 J1 J131 M210 M213 M232 M240 M281 M320 M414
M510 M520 M531 M540 M710 M904 M905 P220 P411 P420 P421 P423 P431
P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528
P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813
P816 P820 P822 P922 P943
DCN: R16027-T; R16027-Q; R16027-N

M2 *42* D013 D022 D120 G013 G100 H4 H402 H442 H8 J5 J521 M1 M113
M280 M320 M412 M511 M520 M531 M540 M710 M904 M905 P220 P411 P420
P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
P811 P812 P813 P816 P820 P822 P922 P943

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        DCN: RA00TD-T; RA00TD-Q; RA00TD-N
M2  *43* G015 G100 H1   H100 H181 H4   H402 H442 H8   M280 M312 M321 M332
         M342 M373 M391 M414 M510 M520 M531 M540 M710 M904 M905 M910 P220
         P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
         P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
         P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
        DCN: R00053-T; R00053-Q; R00053-N
M2  *44* D011 D019 D023 D029 D240 H4   H404 H444 H8   J5   J522 L9   L942
         L999 M280 M320 M412 M511 M520 M530 M540 M710 M904 M905 P220 P411
         P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520
         P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731
         P738 P811 P812 P813 P816 P820 P822 P922 P943
        RIN: 05197 05197
        DCN: R17082-T; R17082-Q; R17082-N; R17083-T; R17083-Q; R17083-N
M2  *45* D013 D023 D120 G017 G100 H4   H405 H421 H444 H8   M1   M113 M280
         M320 M412 M511 M520 M531 M540 M710 M904 M905 P220 P411 P420 P421
         P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523
         P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811
         P812 P813 P816 P820 P822 P922 P943
        DCN: RA00TN-T; RA00TN-Q; RA00TN-N
M2  *46* G015 G100 H1   H102 H181 H4   H403 H442 H481 H8   M210 M211 M273
         M281 M312 M321 M332 M343 M373 M391 M414 M510 M520 M531 M540 M710
         M904 M905 M910 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446
         P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646
         P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922
         P943
        DCN: R00048-T; R00048-Q; R00048-N; R14840-T; R14840-Q; R14840-N
M2  *47* D012 D013 D940 G013 G100 H1   H100 H102 H121 H141 J0   J013 J1
         J172 J3   J331 J5   J521 L9   L910 M280 M311 M313 M321 M332 M342
         M343 M349 M373 M381 M391 M412 M511 M520 M531 M540 M710 M904 M905
         M910 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451
         P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714
         P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
        DCN: R00183-T; R00183-Q; R00183-N
M2  *48* H7   H721 J0   J012 J1   J172 M280 M312 M321 M332 M342 M382 M391
         M416 M710 M904 M905 M910 P220 P411 P420 P421 P423 P431 P433 P434
         P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625
         P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820
         P822 P922 P943
        DCN: R00902-T; R00902-Q; R00902-N; R04891-T; R04891-Q; R04891-N
M2  *49* G017 G100 H4   H403 H443 H8   J0   J011 J1   J131 M280 M320 M414
         M510 M520 M531 M540 M710 M904 M905 M910 P220 P411 P420 P421 P423
         P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526
         P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812
         P813 P816 P820 P822 P922 P943
        DCN: R01170-T; R01170-Q; R01170-N; R09472-T; R09472-Q; R09472-N
M3  *01* C216 D011 D012 D016 D019 D025 D120 D931 F012 F013 F014 F015 F113
         H1   H101 H122 H181 H2   H201 H4   H402 H422 H8   J0   J011 J2
         J241 K0   L7   L730 L8   L812 L821 L831 L834 L943 M210 M211 M225
         M232 M240 M271 M281 M283 M311 M313 M321 M332 M342 M343 M349 M373
         M381 M391 M412 M512 M521 M530 M540 M710 M904 M905 P220 P411 P420
         P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
         P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
         P811 P812 P813 P816 P820 P822 P922 P943
        DCN: RAA9FC-T; RAA9FC-N
M3  *02* C216 D011 D012 D016 D019 D025 D120 D931 F012 F013 F014 F015 F113
         H1   H101 H122 H181 H2   H201 H4   H401 H421 H5   H521 H8   J0
         J011 J1   J171 K0   L7   L730 L8   L812 L821 L831 L834 L943 M1
         M125 M141 M210 M211 M225 M232 M240 M271 M281 M283 M311 M313 M321
         M332 M342 M343 M349 M373 M381 M391 M412 M512 M521 M530 M540 M710
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M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: RAA9FD-T; RAA9FD-N

M3 *03* C216 D011 D012 D016 D019 D025 D120 D931 F012 F013 F014 F015 F113
H1 H101 H122 H181 H2 H201 H4 H401 H421 H5 H521 H8 J0
J011 J1 J171 K0 L7 L730 L8 L812 L821 L831 L834 L943 M1
M125 M141 M210 M211 M225 M232 M240 M271 M281 M283 M311 M313 M321
M332 M342 M343 M349 M373 M381 M391 M412 M512 M521 M530 M540 M710
M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: RAA9FE-T; RAA9FE-N

M3 *04* D012 D016 D022 D023 D024 D025 D120 H723 M210 M211 M225 M232 M240
M281 M282 M283 M320 M412 M511 M520 M530 M540 M710 M904 M905 P220
P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: 0091-83101-T; 0091-83101-N

M3 *05* F011 F012 F013 F014 F015 F019 F113 F542 H1 H100 H121 H2 H211
H4 H403 H422 H481 H8 J5 J521 L9 L910 M210 M211 M240 M281
M311 M321 M342 M373 M391 M413 M510 M522 M530 M540 M710 M904 M905
P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517
P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721
P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: RA76PC-T; RA76PC-Q; RA76PC-N

M3 *06* D011 D013 D931 F012 F013 F014 F015 F113 H1 H102 H122 H2 H201
H4 H403 H422 H481 H5 H592 H8 H9 K0 L8 L812 L821 L834
L910 M210 M211 M215 M232 M271 M273 M281 M311 M321 M342 M373 M391
M412 M511 M521 M530 M540 M710 M904 M905 P220 P411 P420 P421 P423
P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526
P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812
P813 P816 P820 P822 P922 P943
DCN: RAA9FG-T; RAA9FG-Q; RAA9FG-N

M3 *07* D011 D013 D931 F012 F013 F014 F015 F113 H1 H100 H122 H2 H201
H4 H403 H422 H481 H8 L943 M210 M211 M240 M281 M311 M321 M342
M373 M391 M412 M511 M521 M530 M540 M710 M904 M905 P220 P411 P420
P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
P811 P812 P813 P816 P820 P822 P922 P943
DCN: RA6YSO-T; RA6YSO-Q; RA6YSO-N

M3 *08* F011 F012 F013 F014 F015 F019 F113 F542 H1 H100 H121 H2 H211
H4 H402 H421 H481 H5 H521 H8 J5 J521 K0 L8 L812 L821
L834 L9 L910 M210 M211 M272 M281 M311 M321 M342 M373 M391 M413
M510 M522 M530 M540 M710 M800 M904 M905 P220 P411 P420 P421 P423
P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526
P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812
P813 P816 P820 P822 P922 P943
DCN: RA8CBT-T; RA8CBT-Q; RA8CBT-N

M3 *09* F011 F012 F013 F014 F015 F019 F113 F542 H2 H211 H4 H403 H422
H481 H8 J5 J522 K0 L8 L812 L821 L834 L9 L910 M210 M211
M240 M281 M311 M321 M342 M373 M391 M413 M510 M522 M530 M540 M710
M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R23688-T; R23688-Q; R23688-N

M3 *10* D011 D013 D931 F012 F013 F014 F015 F113 H1 H100 H122 H2 H201
H4 H402 H421 H481 H5 H521 H8 J5 J521 L8 L810 L811 L812
L813 L821 L834 L9 L910 M210 M211 M272 M281 M311 M321 M342 M373
M391 M412 M511 M521 M530 M540 M710 M800 M904 M905 P220 P411 P420

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        P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
        P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
        P811 P812 P813 P816 P820 P822 P922 P943
        DCN: RA8DA0-T; RA8DA0-Q; RA8DA0-N
M3  *11* D011 D019 D931 F012 F013 F014 F015 F113 H1   H100 H122 H2   H201
        H4   H402 H421 H481 H5   H521 H8   L943 M210 M211 M272 M281 M311
        M321 M342 M373 M391 M412 M511 M521 M530 M540 M710 M904 M905 P220
        P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
        P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
        P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
        DCN: RA0TL1-T; RA0TL1-Q; RA0TL1-N
M3  *12* G015 G100 H4   H402 H441 H481 H5   H541 H8   J5   J581 M210 M211
        M272 M281 M312 M315 M321 M331 M332 M342 M372 M381 M391 M414 M510
        M520 M531 M540 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433
        P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616
        P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816
        P820 P822 P922 P943
        DCN: R20165-T; R20165-Q; R20165-N
M3  *13* G017 G100 H4   H401 H441 H8   M210 M211 M214 M233 M240 M283 M320
        M414 M510 M520 M531 M540 M710 M904 M905 M910 P220 P411 P420 P421
        P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523
        P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811
        P812 P813 P816 P820 P822 P922 P943
        DCN: R01090-T; R01090-Q; R01090-N; R16639-T; R16639-Q; R16639-N
M3  *14* H1   H181 J0   J012 J1   J171 J2   J271 K0   L7   L722 M210 M211
        M262 M273 M281 M283 M313 M321 M332 M343 M381 M391 M416 M620 M710
        M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
        P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
        P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
        DCN: R07500-T; R07500-Q; R07500-N; R07501-T; R07501-Q; R07501-N
M3  *15* F012 F013 F014 F015 F019 F113 F542 H4   H402 H421 H481 H5   H521
        H8   J5   J522 K0   L8   L812 L821 L831 L835 L9   L910 M1   M116
        M210 M211 M272 M281 M311 M321 M342 M373 M391 M413 M510 M522 M530
        M540 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444
        P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633
        P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822
        P922 P943
        DCN: RAA9FL-T; RAA9FL-Q; RAA9FL-N
M3  *16* G015 G100 H4   H402 H441 H481 H5   H541 H8   J0   J011 J1   J171
        M210 M211 M272 M281 M311 M321 M343 M349 M371 M391 M414 M510 M520
        M531 M540 M710 M904 M905 M910 P220 P411 P420 P421 P423 P431 P433
        P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616
        P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816
        P820 P822 P922 P943
        DCN: R00091-T; R00091-Q; R00091-N
M3  *17* F011 F012 F013 F014 F015 F019 F113 F542 H2   H211 H4   H402 H421
        H481 H5   H521 H8   J5   J522 K0   L8   L812 L821 L831 L834 L9
        L910 M210 M211 M272 M281 M311 M321 M342 M373 M391 M413 M510 M522
        M530 M540 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433 P434
        P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625
        P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820
        P822 P922 P943
        DCN: RAA9FM-T; RAA9FM-Q; RAA9FM-N
M3  *18* D011 D013 D931 F012 F013 F014 F015 F113 H1   H103 H122 H2   H201
        H4   H402 H421 H481 H5   H521 H8   J5   J521 K0   L8   L812 L821
        L831 L834 L9   L910 M210 M211 M272 M273 M281 M282 M311 M321 M342
        M373 M391 M412 M511 M521 M530 M540 M710 M904 M905 P220 P411 P420
        P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
        P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
        P811 P812 P813 P816 P820 P822 P922 P943
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DCN: RAA9FV-T; RAA9FV-Q; RAA9FV-N
M3 *19* F011 F012 F013 F014 F015 F019 F113 F542 H2 H211 H4 H402 H421
H481 H5 H521 H8 J5 J522 K0 L8 L812 L821 L831 L834 L9
L910 M210 M211 M240 M272 M281 M311 M321 M342 M373 M391 M413 M510
M522 M530 M540 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433
P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616
P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816
P820 P822 P922 P943
DCN: RAA9FW-T; RAA9FW-Q; RAA9FW-N
M3 *20* D011 D019 D931 F012 F013 F014 F015 F113 H1 H102 H122 H2 H201
H4 H402 H421 H481 H5 H521 H8 K0 L8 L812 L821 L831 L834
L943 M210 M211 M272 M273 M281 M311 M321 M342 M373 M391 M412 M511
M521 M530 M540 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433
P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616
P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816
P820 P822 P922 P943
DCN: RAA9FX-T; RAA9FX-Q; RAA9FX-N
M3 *21* F011 F012 F013 F014 F015 F019 F113 F542 H1 H100 H181 H2 H212
H4 H403 H422 H481 H8 J0 J011 J1 J171 J5 J522 K0 L8
L812 L821 L834 L9 L910 M280 M311 M313 M321 M332 M342 M343 M349
M373 M381 M391 M413 M510 M522 M530 M540 M710 M904 M905 P220 P411
P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520
P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731
P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: RAA9FY-T; RAA9FY-Q; RAA9FY-N
M3 *22* H1 H181 J0 J011 J2 J271 K0 L7 L722 M210 M211 M262 M273
M281 M283 M312 M321 M332 M342 M383 M391 M416 M620 M710 M904 M905
M910 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451
P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714
P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R00058-T; R00058-Q; R00058-N
M3 *23* C216 H7 H716 H723 K0 K2 K224 K4 K442 M210 M213 M231 M271
M282 M313 M321 M332 M342 M383 M391 M416 M710 M904 M905 P220 P411
P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520
P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731
P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R06395-T; R06395-Q; R06395-N
M3 *24* H1 H100 H181 J0 J011 J1 J171 M280 M312 M321 M331 M340 M342
M349 M381 M391 M416 M620 M710 M904 M905 M910 P220 P411 P420 P421
P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523
P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811
P812 P813 P816 P820 P822 P922 P943
DCN: R01210-T; R01210-Q; R01210-N; R10414-T; R10414-Q; R10414-N
M3 *25* G030 G038 G530 H1 H100 H161 J0 J011 J1 J151 M280 M320 M415
M510 M520 M530 M541 M710 M904 M905 P220 P411 P420 P421 P423 P431
P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528
P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813
P816 P820 P822 P922 P943
DCN: R06983-T; R06983-Q; R06983-N
M3 *26* F011 F015 F521 H1 H100 H182 H2 H201 J0 J012 J1 J171 J3
J371 M210 M211 M273 M281 M312 M322 M332 M342 M343 M349 M371 M381
M391 M413 M510 M521 M530 M540 M710 M800 M904 M905 P220 P411 P420
P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
P811 P812 P813 P816 P820 P822 P922 P943
DCN: R11742-T; R11742-Q; R11742-N
M3 *27* D013 D023 D120 G013 G100 H4 H403 H443 H8 J5 J521 M1 M113
M280 M320 M412 M511 M520 M531 M540 M710 M904 M905 P220 P411 P420
P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738

P811 P812 P813 P816 P820 P822 P922 P943
DCN: ***R06069-T; R06069-Q; R06069-N***

M3 *28* H7 H723 J0 J011 J1 J171 M226 M231 M262 M281 M320 M416 M710
M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R04038-T; R04038-Q; R04038-N; R13711-T; R13711-Q; R13711-N

M3 *29* H1 H100 H181 J0 J011 J1 J171 K0 L2 L250 M280 M314 M321
M332 M343 M349 M381 M391 M416 M620 M710 M904 M905 M910 P220 P411
P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520
P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731
P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R01661-T; R01661-Q; R01661-N; R04740-T; R04740-Q; R04740-N

M3 *30* G037 G038 G039 G562 G599 H4 H402 H462 H7 H725 H8 J5 J562
M1 M126 M135 M210 M211 M240 M283 M316 M321 M333 M342 M415 M510
M520 M530 M542 M710 M904 M905 P220 P411 P420 P421 P423 P431 P433
P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616
P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816
P820 P822 P922 P943
DCN: R11112-T; R11112-Q; R11112-N

M3 *31* D012 D013 D940 H1 H100 H121 H4 H402 H482 H8 J5 J521 L9
L910 M280 M313 M321 M331 M343 M373 M391 M412 M511 M520 M530 M540
M710 M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446
P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646
P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922
P943
DCN: RA1717-T; RA1717-Q; RA1717-N

M3 *32* H1 H181 J0 J011 J1 J171 K0 L7 L722 M210 M211 M273 M283
M311 M321 M342 M349 M381 M391 M416 M620 M710 M904 M905 M910 P220
P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R00829-T; R00829-Q; R00829-N

M3 *33* H1 H181 H4 H401 H481 H8 J0 J011 J1 J171 K0 L7 L722
M210 M211 M273 M283 M313 M321 M332 M343 M381 M391 M416 M620 M710
M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R12266-T; R12266-Q; R12266-N

M3 *34* F014 F521 H1 H100 H181 J0 J012 J1 J171 J3 J371 M280 M312
M322 M332 M342 M343 M349 M371 M381 M391 M413 M510 M521 M530 M540
M710 M904 M905 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446
P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646
P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922
P943
DCN: R08807-T; R08807-Q; R08807-N

M3 *35* D013 D023 D120 G015 G100 H4 H405 H421 H444 H8 M1 M113 M280
M320 M412 M511 M520 M531 M540 M710 M904 M905 P220 P411 P420 P421
P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523
P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811
P812 P813 P816 P820 P822 P922 P943
DCN: R04686-T; R04686-Q; R04686-N

M3 *36* G015 G037 G038 G111 G563 H4 H405 H442 H463 H7 H721 H8 J0
J012 J1 J151 J2 J261 K0 L8 L818 L821 L832 M280 M312 M321
M332 M342 M372 M391 M414 M510 M520 M531 M541 M710 M904 M905 P220
P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
DCN: R12870-T; R12870-Q; R12870-N

M3 *37* H1 H181 H4 H401 H481 H8 K0 L7 L722 M210 M211 M273 M283

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        M312 M321 M332 M342 M383 M391 M416 M620 M710 M904 M905 M910 P220
        P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
        P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
        P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
        DCN: R00231-T; R00231-Q; R00231-N; R04247-T; R04247-Q; R04247-N
M3  *38* H4   H401 H481 H8   J0   J013 J1   J173 M280 M313 M321 M332 M344
        M349 M381 M391 M416 M620 M710 M904 M905 M910 P220 P411 P420 P421
        P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523
        P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811
        P812 P813 P816 P820 P822 P922 P943
        DCN: R00419-T; R00419-Q; R00419-N; R07029-T; R07029-Q; R07029-N
M3  *39* J0   J011 J1   J171 K0   L2   L250 M210 M211 M273 M281 M311 M321
        M342 M349 M381 M391 M416 M620 M710 M904 M905 M910 P220 P411 P420
        P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
        P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
        P811 P812 P813 P816 P820 P822 P922 P943
        DCN: R00118-T; R00118-Q; R00118-N
M3  *40* F011 F012 F014 F522 H1   H100 H121 H181 H2   H201 J5   J521 L9
        L910 M210 M211 M273 M281 M320 M413 M510 M521 M530 M540 M710 M904
        M905 M910 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448
        P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711
        P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
        DCN: R00203-T; R00203-Q; R00203-N
M3  *41* G013 G100 J0   J011 J1   J131 M210 M213 M232 M240 M281 M320 M414
        M510 M520 M531 M540 M710 M904 M905 P220 P411 P420 P421 P423 P431
        P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528
        P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813
        P816 P820 P822 P922 P943
        DCN: R16027-T; R16027-Q; R16027-N
M3  *42* D013 D022 D120 G013 G100 H4   H402 H442 H8   J5   J521 M1   M113
        M280 M320 M412 M511 M520 M531 M540 M710 M904 M905 P220 P411 P420
        P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522
        P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738
        P811 P812 P813 P816 P820 P822 P922 P943
        DCN: RA00TD-T; RA00TD-Q; RA00TD-N
M3  *43* G015 G100 H1   H100 H181 H4   H402 H442 H8   M280 M312 M321 M332
        M342 M373 M391 M414 M510 M520 M531 M540 M710 M904 M905 M910 P220
        P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519
        P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723
        P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
        DCN: R00053-T; R00053-Q; R00053-N
M3  *44* D011 D019 D023 D029 D240 H4   H404 H444 H8   J5   J522 L9   L942
        L999 M280 M320 M412 M511 M520 M530 M540 M710 M904 M905 P220 P411
        P420 P421 P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520
        P522 P523 P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731
        P738 P811 P812 P813 P816 P820 P822 P922 P943
        RIN: 05197 05197
        DCN: R17082-T; R17082-Q; R17082-N; R17083-T; R17083-Q; R17083-N
M3  *45* D013 D023 D120 G017 G100 H4   H405 H421 H444 H8   M1   M113 M280
        M320 M412 M511 M520 M531 M540 M710 M904 M905 P220 P411 P420 P421
        P423 P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523
        P526 P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811
        P812 P813 P816 P820 P822 P922 P943
        DCN: RA00TN-T; RA00TN-Q; RA00TN-N
M3  *46* G015 G100 H1   H102 H181 H4   H403 H442 H481 H8   M210 M211 M273
        M281 M312 M321 M332 M343 M373 M391 M414 M510 M520 M531 M540 M710
        M904 M905 M910 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446
        P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646
        P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922
        P943
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          DCN: R00048-T; R00048-Q; R00048-N; R14840-T; R14840-Q; R14840-N
M3   *47* D012 D013 D940 G013 G100 H1   H100 H102 H121 H141 J0   J013 J1
          J172 J3   J331 J5   J521 L9   L910 M280 M311 M313 M321 M332 M342
          M343 M349 M373 M381 M391 M412 M511 M520 M531 M540 M710 M904 M905
          M910 P220 P411 P420 P421 P423 P431 P433 P434 P444 P446 P448 P451
          P517 P519 P520 P522 P523 P526 P528 P616 P625 P633 P646 P711 P714
          P721 P723 P731 P738 P811 P812 P813 P816 P820 P822 P922 P943
          DCN: R00183-T; R00183-Q; R00183-N
M3   *48* H7   H721 J0   J012 J1   J172 M280 M312 M321 M332 M342 M382 M391
          M416 M710 M904 M905 M910 P220 P411 P420 P421 P423 P431 P433 P434
          P444 P446 P448 P451 P517 P519 P520 P522 P523 P526 P528 P616 P625
          P633 P646 P711 P714 P721 P723 P731 P738 P811 P812 P813 P816 P820
          P822 P922 P943
          DCN: R00902-T; R00902-Q; R00902-N; R04891-T; R04891-Q; R04891-N
M3   *49* G017 G100 H4   H403 H443 H8   J0   J011 J1   J131 M280 M320 M414
          M510 M520 M531 M540 M710 M904 M905 M910 P220 P411 P420 P421 P423
          P431 P433 P434 P444 P446 P448 P451 P517 P519 P520 P522 P523 P526
          P528 P616 P625 P633 P646 P711 P714 P721 P723 P731 P738 P811 P812
          P813 P816 P820 P822 P922 P943
          DCN: R01170-T; R01170-Q; R01170-N; R09472-T; R09472-Q; R09472-N

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